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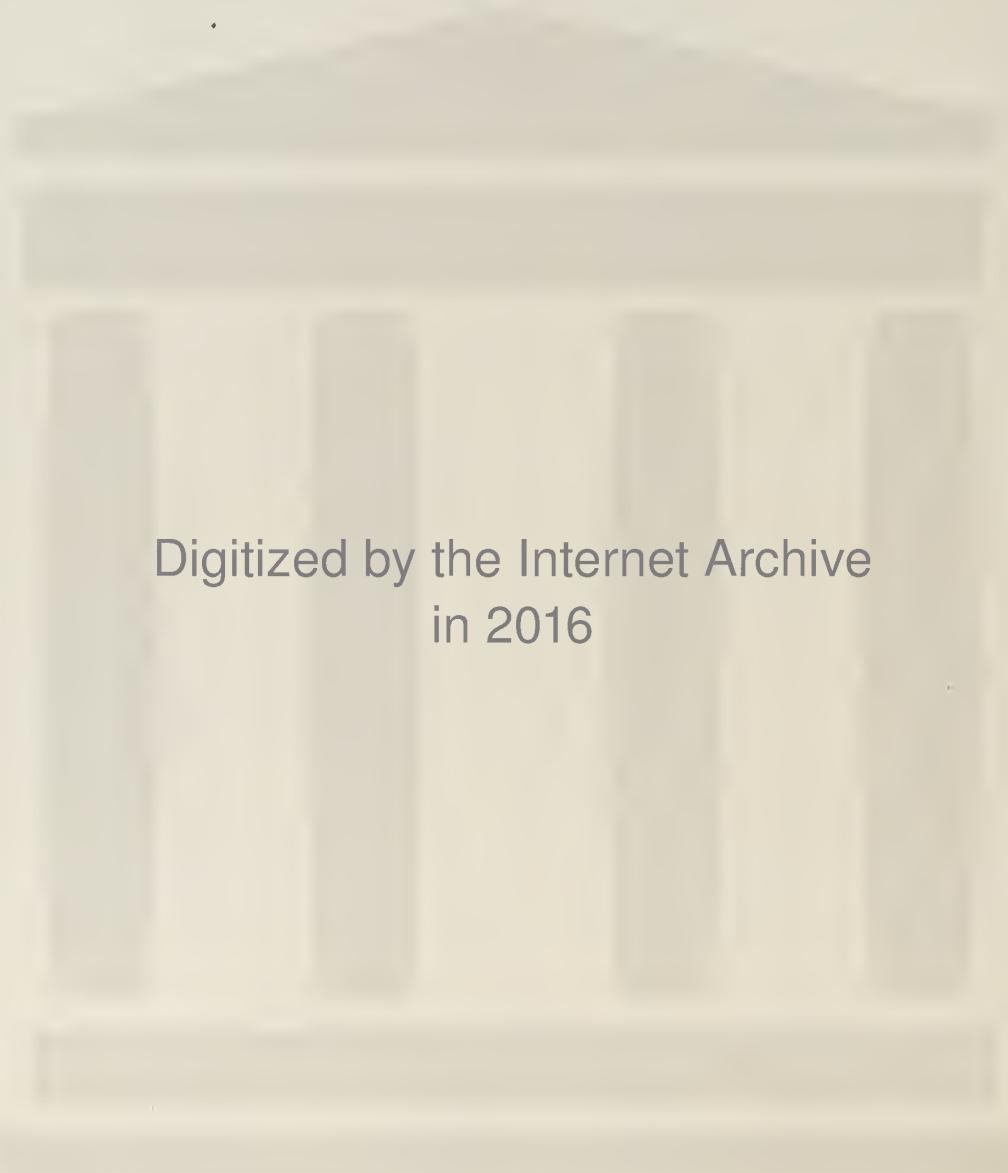
August 1, 1939

Number 6

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I N S E C T   P E S T   S U R V E Y   B U L L E T I N

Vol. 19

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THE MORE IMPORTANT RECORDS FOR JULY

By the third week in the month general control operations for the control of the long-winged grasshopper was completed in Colorado and Oklahoma, the work in New Mexico and Texas having been completed about a week earlier. Clean-up work, however, on egg-laying concentration areas will be continued throughout the season. Control was so successful as to prevent important flights. Control work in the northern Great Plains is practically completed. The populations are shifting from harvested fields and considerable damage is being done to fall crops. Losses from flights, however, do not compare with those of last season.

A colony of European earwig discovered at New Haven, Conn., last year became apparently thoroughly established. In the Pacific Northwest this insect is much more numerous than last year.

Heavy populations of June beetles are reported from the northern part of the Eastern Shore of Maryland and from southern Virginia.

The Japanese beetle is becoming more seriously abundant in the rural areas of Connecticut and this year was reported for the first time attacking shade-grown tobacco. Southern New York, northern Maryland, and the Eastern Shores of Maryland and Virginia also report considerable defoliation of ornamental shrubbery and trees and spotted damage to agricultural crops.

The beet webworm was reported as doing some damage in North Dakota and Nebraska, with heavy flights of moths early in the month. The sugar beet crop in Utah County, Utah, is much more heavily infested than in previous seasons.

The chinch bug caused local damage in several counties in Indiana, in local areas in Illinois, and in southern Michigan and Wisconsin. A potential outbreak in Iowa was relieved by timely rain. Less extensive infestations were reported from Missouri and Nebraska.

In the Mississippi Valley as far northward as Wisconsin, Minnesota, and South Dakota corn ear worm seems to be abnormally abundant.

European corn borer seriously abundant in Connecticut, southeastern New York, and central New Jersey. The insect is apparently increasing in eastern Indiana and a survey conducted late in July showed 7 infested counties in Wisconsin.

The most general outbreak of the fall armyworm reported in several years was occurring in Mississippi. A minor infestation was reported from Georgia.

Pea aphid was very abundant in Maine and locally in New York did considerable damage. In Wisconsin the populations were low. In Washington State heavy damage was reported from the Centralia district in the western part.

The vetch bruchid is now known to occur in the six northern counties of the Willamette Valley of Oregon and in four counties immediately adjacent to this area in Washington State.

Blister beetles are generally abundant and doing considerable damage over limited areas throughout the upper Mississippi and Great Basin States. This abundance is probably associated with the large numbers of grasshoppers in these areas.

Corn ear worm is reported as damaging tomatoes over a wide area extending from South Carolina northward and westward to Indiana and Nebraska, also in Benton County, Wash.

Heavy infestation of barreled and sacked potatoes on the Eastern Shore of Virginia by the potato tuber moth was reported during the middle of the month.

An outbreak of a disease closely associated with western aster yellows is occurring on potatoes in western New York. This disease is supposed to be transmitted by the six-spotted leafhopper.

The cabbage weevil (Ceutorhynchus assimilis Gyll.) was collected in several localities in Washington for the first time. It is recorded from Pacific, Clark, Lewis, Cowlitz, Thurston, Pierce, Clallam, Whatcom, Skagit, and Grays Harbor Counties.

Heavy infestations of onions by the onion thrips were reported from New York, Connecticut, and Washington State.

Fuller's rose beetle was reported as seriously infesting pimiento peppers in central Georgia.

The codling moth did considerable damage in the Hudson River Valley of New York State and in Delaware. Injurious numbers were also reported from Virginia, Indiana, and westward to Minnesota.

Heavy infestations of aphids on apples are reported from Maine, New York, and Virginia.

Heavy infestation of Georgia Belle and Elberta peaches by second-generation plum curculio larvae is reported from central Georgia. A similar heavy infestation is reported from Mississippi. Considerable damage is also reported from Texas.

More damage by the raspberry fruitworm than ever before recorded was observed this year around Minneapolis and Saint Paul, Minn. Heavy damage is also reported from Michigan.

Although reported as doing considerable damage in some localities, the boll weevil as a whole does not appear to be more abundant than at this time last year.

During May the forest tent caterpillar defoliated extensive stands of willow along the northern bank of the Columbia River in Washington State, and in southeastern Oregon an infestation in Coos County was attracting attention. The western tent caterpillar (Malacosoma pluvialis Dyar) occurred in outbreak numbers in the Puget Sound region of Washington State, heavily defoliating alder and a number of other small trees, including some cultivated fruits. A less serious outbreak of this insect occurred in Linn County, Oreg.

An epidemic of the Great Basin tent caterpillar (Malacosoma fragilis Stretch) reappeared in the Deschutes National Forest of Oregon after a lapse of nearly 10 years. This insect defoliates bitterbrush, an important range plant in that region.

The fall webworm was generally abundant throughout the New England and Middle Atlantic States and southward to Georgia and Mississippi.

The Douglas-fir beetle was present in destructive numbers in parts of Idaho and Oregon. In the Shot Gun Valley of Oregon a large percentage of Douglas-fir has been destroyed during the last 3 years.

Dog ticks have been unusually abundant this season, and have remained so later than in recent years in the New England and Middle Atlantic States and parts of Wisconsin.

A caterpillar, Pseudohazis sp., probably P. hera Harr., has practically defoliated the snowberry bushes over approximately 150,000 acres in Minidoka National Forest in Idaho.

G E N E R A L F E E D E R S

GRASSHOPPERS (Arididae)

General. B. M. Gaddis (July 7): Most of the lesser migratory hoppers (Melanoplus mexicanus Sauss.) have reached the adult stage and the rest are rapidly maturing. In the southern half of this species' range eggs are being laid. Concentration in crops becoming general from areas in eastern Montana and Wyoming, from western Nebraska and the Dakotas, and in eastern Colorado and southwestern Kansas. Populations on idle and abandoned lands dwindling. (July 13): Flights have recently been general in the Northern Great Plains area, but have been moderate and crop destruction is light. Up to July 8 no definite reports of large swarms as invading new territory nor of serious crop losses from migrations in Montana and North Dakota. (July 19): Populations so reduced that control operations are no longer justified. Populations shifting daily, particularly from harvested fields, with concentrations on the more succulent crops, such as corn, and considerable damage in local areas. Losses from flights do not compare with those of last season. Oviposition just starting and potential flights may be stopped on this account, thus possibly causing heavier damage in local areas than has resulted from the hitherto shifting of populations. Hoppers now largely in the adult stage. (July 7): Control operations for the long-winged migratory grasshopper (Dissosteira longipennis Thos.) continuing in Colorado along the northeastern border of New Mexico and in Lincoln County, to be complete about mid-July. No extensive flights reported. Remaining adults thinly scattered, with little tendency to band together. (July 13): In the Texas Panhandle rarely found exceeding 2 or 3 per square yard, where formerly they numbered hundreds per square yard. Control work practically completed in New Mexico, along the Colorado-New Mexico border, in the Oklahoma Panhandle, and in southeastern Kansas. Work reduced in Colorado, to be finished in a short time. Flights of a minor local character reported recently in New Mexico, originating apparently in an isolated, inaccessible, mountainous area on the Colorado-New Mexico border. (July 19): Control operations in Colorado and Oklahoma discontinued the middle of July. Control in Colorado complete up to 85 to 90 percent. Work in Kansas to be finished by the end of this week. Remaining hoppers so scattered as to preclude economic control. Control so successful as to prevent consequential flights and to bring them down to noneconomic proportions.

Indiana. J. J. Davis (July 22): Unusually abundant in some areas, especially in northern Indiana. In a 200-acre orchard at Elkhart young hoppers were very numerous in the alfalfa cover crop, migrating to trees and seriously damaging peach fruits.

Wisconsin. E. L. Chambers (July 24): Wet, cold weather in the northwestern part of the State, where grasshoppers were expected to be most serious from the fall egg survey, kept the grasshoppers well in check until mid-July, when the red-legged species (M. femur-rubrum Deg.) began to hatch. Now threatening corn, sugarbeets, tobacco, and emergency hay crops in this area, as well as in about six counties in the east-central part of the State.

Missouri. L. Haseman (July 25): Considerable control operations being conducted in southeastern and south-central Missouri, with less in other parts of the State. Apparently a rather heavy second brood of M. mexicanus is evident in southern Missouri.

Minnesota. A. G. Ruggles and assistants (July 20): Some flights of grasshoppers taking place in the Red River Valley on July 9 and 10. Losses held to less than 3 percent through timely application of control measures.

Kansas. H. R. Bryson (July 25): Grasshoppers not abundant in the eastern half of the State but are abundant in the west-central and southwestern counties.

Nebraska. M. H. Swenk (July 15): Reports of damage to field crops received from June 21 to July 15 from all parts of the State. Report from Perkins County of the bark and needles of pine trees being damaged. Specimens received from Cass County, killed by a fungus. Several reports of heavy infestation with larvae of the flesh fly (Sarcophaga kellyi Ald.) received from central Nebraska counties in July. Report from Antelope County indicated that Eutrombidium trigonum Hermann is attacking grasshoppers.

Iowa. H. E. Jaques (July): Infestation concentrated in western Iowa, with scattered infestation in central and eastern parts of the State.

North Dakota. J. A. Munro (July 20): Injury to early crops apparently light, as compared to 1938. Possibility yet of severe injury to flax, potatoes, and other later maturing crops in localized areas. Control campaign throughout the State largely successful. M. mexicanus is the predominating species and commonly in flight on days when temperatures range above 85° F. Natural enemies of eggs, including bee flies and blister beetles, generally abundant.

Utah. G. F. Knowlton (July 18): Outbreaks in many counties, scattered throughout the State, are menacing crops more seriously than last year.

Georgia. D. F. Farlinger (July 20): Moderate to severe outbreaks of Schistocerca americana Drury in Randolph, Sumter, Houston, Wilkes, McDuffie, and Washington Counties. Feeding on corn, cotton, peanuts, sorghum, and Johnson grass. Severe injury in limited areas. Emerging from grain stubble fields. All known outbreaks treated.

O. I. Snapp (July 18): Considerable damage to corn and cotton, chiefly the former, at Fort Valley, Perry, Byron, and other central Georgia localities during the period June 27 to July 18. Corn damaged especially where adjoining grain fields, plowed after harvest of the crop, thus driving insects from these fields. Infestation sufficient on most farms to warrant use of control measures.

#### MORMON CRICKET (Anabrus simplex Hald.)

Utah. C. J. Sorenson (July 18): Very abundant in West Tintic and Sheeprock Mountains and in the foothills of Juab and Tooele Counties. They seriously threatened but did only minor damage to crops on scattered dry-land farms and ranches. Cooperative control program successful in preventing serious damage to crops and range forage.

EUROPEAN EARWIG (Forficula auricularia L.)

Connecticut. J. V. Schaffner, Jr. (July 24): Found in 1938 in a garden at New Haven. Five traps recently put in this garden and on the first examination of the traps 156 earwigs were found.

Rhode Island. A. E. Stene (July 19): A little above average in abundance in Newport County. Bait and several consignments of parasites being distributed.

Idaho. C. W. Getzendaner (July 20): A considerable increase in numbers over last year noted at Moscow.

Utah. G. F. Knowlton and F. C. Harmston (July 3): Seriously infesting ripening apricots at Farmington.

Washington. E. W. Jones (July 10): Infestations at Walla Walla increased this year. Practically all of this year's brood have reached the adult stage.

C. W. Getzendaner (July 20): A considerable increase in numbers over last year noted at Puyallup, Bellingham, Everett, Walla Walla, Pullman, Yakima, Ellensburg, Tacoma, Auburn, Hoquiam, and South Bend. Found moderately abundant at Port Townsend on July 14, and found at Pasco on July 8.

Oregon. G. F. Knowlton (July 14): Specimens taken on the Columbia River Highway on June 20, at Bandon, on June 22, and at Woodburn on June 21.

WHITE GRUBS (Phyllophaga spp.)

Maryland. E. N. Cory (July 20): Heavy infestation of adults on oak and pecan on the upper end of the Eastern Shore.

Virginia. C. R. Willey and F. R. Freund (July): Specimens of May beetles (probably P. fervida F.) brought in from Henrico County on July 5. Found in a cornfield at night, 10 to 15 beetles on each stalk eating edges of leaves. Specimens from Chesterfield County, feeding on elm and roses. On July 6, 100 beetles collected from 1 rose bush. Specimens from Chesterfield County, 3 miles south of Richmond on July 10, where they had stripped apples, pears, and peaches of foliage, also feeding on rose, pecan, and crapemyrtle. Specimens from Lester Manor, King William County, found feeding, particularly on roses, on July 12. Other specimens from Atlee, Ashland, and Fredericksburg.

Indiana. J. J. Davis (July 22): Less destructive than usual in the strawberry section near Borden and Pekin. Based on collections and rearings, P. ephilida Say, P. quercus Knoch, and P. hirticula Knoch were apparently the species largely responsible for damage in 1938.

Minnesota. A. G. Ruggles and assistants (July 20): P. rugosa Melsh. and P. fusca Froel., Brood A, very abundant on corn and barley at Hammond, Wabasha County.

GREEN JUNE BEETLE (Cotinis nitida L.)

Virginia. A. M. Woodside (July 22): Very common in codling moth bait pails in Augusta County.

H. G. Walker and L. D. Anderson (July 27): Unusually abundant around several homes and at several golf courses at Norfolk during the last 3 weeks.

Ohio. N. F. Howard (July 6): Adults very numerous at South Point.

Kentucky. W. A. Price (July): Beetles began flying the first week in July and, by the middle of the month, were causing some damage to tomatoes, peaches apples, blackberries, and corn in the vicinity of Lexington.

JAPANESE BEETLE (Popillia japonica Newm.)

Connecticut. J. P. Johnson (July 24): Larger city infestations have grown to such an extent that considerable defoliation is occurring. Also spreading into the semiurban and rural sections.

A. W. Morrill, Jr. (July 17): Present in such abundance in the Windsor area that many calls have been received. Reported today in a new location. Two tents of shade-grown tobacco found, where the plants were liberally sprinkled with adults and where many leaves showed evidence of feeding. Also observed feeding. In one instance dirt hauled in to fill a wash came from a sod patch, where a good-sized emergence was found on smartweed. Nearby wild grapes also found attacked. In the other instance, infestation apparently from witchgrass, growing along the edge of the field, which was said to have covered the lot last year, when sun-grown tobacco was raised there. So far as known, this is the first record of its kind.

New York. E. P. Felt (July 22): Extremely numerous in parts of Westchester County and also on western Long Island. Distribution and consequent damage are spotted.

M. D. Leonard (July 21): First observed at Flushing about July 1, although possibly present a few days prior to that date. Fairly abundant now, and peak of emergence apparently reached. Amount of feeding greatly reduced by control measures. Light to rather severe damage observed.

N. Y. State Coll. Agr. News Letter (July 10): First found near Kingston Ulster County, in 1938, and now beginning to emerge. First adults observed on July 5. (July 24): Causing considerable damage in Westchester County. Formerly confined to shade trees and shrubs, but now attacking sweet corn and orchards.

New Jersey. M. D. Leonard (July 6): Beetles producing light feeding on a number of sassafras bushes examined at Ridgewood, Bergen County, northern New Jersey. No other plants attacked, so far as could be observed.

C. W. Collins (July 19): Abundance continues to increase each year around Morristown.

Delaware. L. A. Stearns (July 22): Infestation now at its height for the season. Rather spotty and somewhat less severe in general in New Castle County, northern Delaware, than in 1938, but much more serious in Kent County, central Delaware. Considerable damage to potato observed on one farm.

Virginia. H. G. Walker and L. D. Anderson (July 27): Much more abundant in the Norfolk area and on the Eastern Shore of Virginia than last year. Injury to ornamental plants in Norfolk. Trapping records at Norfolk show 266 beetles caught in 24 traps this year, as compared with 109 beetles for the entire season last year.

H. C. Donohoe (July 15): Current infestation most severe on the Eastern Shore, with the greatest noted intensity in and near Cape Charles, Hallwood, and New Church. Considerable defoliation of ornamental shrubbery and trees, and some feeding on corn, beans, and sweetpotato reported. Sharp decline in abundance started about July 10, and beetles now generally disappearing.

#### ASIATIC GARDEN BEETLE (*Autoserica castanea* Arrow)

Connecticut. J. P. Johnson (July 20): Report and a few adult specimens received from a grower of sweet corn in southwestern Connecticut. Investigation revealed that corn seedlings, 4 to 6 inches tall, had been killed, caused by the grubs feeding on the roots. Field in sod last year. Thousands of emergence holes observed. Field approximately 4 acres in extent, and about half the crop lost, owing to grub damage.

New York. N. Y. State Coll. Agr. News Letter (July 17): Destructive to young cabbage plants and Japanese lantern in a few localities on Long Island.

#### BUMBLE FLOWER BEETLE (*Euphoria inda* L.)

Virginia. C. R. Willey and F. R. Freund (July): Twenty-five pupal cells brought in on July 12 from Charles City County. First collection in pupal form. Number brought in and use as fish bait indicate their abundance.

#### A WEEVIL (*Calomycterus setarius* Roelofs.)

Connecticut. M. P. Zappe (July 13): Adults appearing somewhat later than usual and not so abundant as last year on desmodium and lespedeza at Stratford.

#### WIREWORMS (Elateridae)

Connecticut. A. W. Morrill, Jr. (July 17): Limonius agonus Say unusually abundant and widespread in the Windsor area, but disappeared about June 8 and did not reappear in most fields until plants were too big to be injured.

South Carolina. F. Sherman (July 22): Sand wireworm (Horistonotus uhleri Horn) reported as destructive in the southern part of the State.

Minnesota. A. G. Ruggles and assistants (July 20): Moderately to very abundant in southern Minnesota.

Utah. G. F. Knowlton (July 22): Potatoes, beets, corn, and other crops damaged in many fields at Lewiston, northern Utah.

Washington. E. W. Jones (July 7): Larvae of L. canus Lec. damaged 50 percent of the early potato crop in certain fields at Kennewick, eastern Benton Count

California. A. F. Howland (July 14): Two acres of corn at Downey, southern California, had less than a 10-percent stand, owing to injury by sugarbeet wireworm (L. californicus Mann.). Nine found per square foot in the soil when samples were taken, although the field was left without water for several weeks.

A CERAMBYCID (Prionus fissicornis Hald.)

Nebraska. M. H. Swenk (July 15): About 70 percent of a 55-acre cornfield in Saunders County reported as damaged by larvae. Corn planted on ground just broken out of sod.

BEET WEBWORM (Loxostege sticticalis L.)

North Dakota. J. A. Munro (July 20): Injury to gardens reported from the LaMoure area. Moths reported as abundant in the Mandan and Minot areas.

Nebraska. M. H. Swenk (July 15): Reported as appearing in large numbers in Garden County on June 27.

Utah. Provo Daily Herald (June 15): Sugar beet crop in Utah County infested, probably worst in the Springville and American Fork areas. Much more prevalent than in previous seasons. Control measures applied.

G. F. Knowlton (July 22): Moths abundant in light traps at Syracuse.

WHITE-LINED SPHINX (Sphinx lineata F.)

Utah. G. F. Knowlton and W. P. Nye (June 30): Grapes defoliated in the vicinity of mouth of Rock Canyon, Utah County.

C E R E A L A N D F O R A G E - C R O P I N S E C T S

WHEAT AND OTHER SMALL GRAINS

HESSIAN FLY (*Phytophaga destructor* Say)

Michigan. R. Hutsom (July 25): Caused serious damage in a 25-acre field of wheat at Deckerville, Sanilac County.

Nebraska. M. H. Swenk (July 15): Infested wheat received from Nemaha County on June 24. The infestation follows the Missouri River north to Burt County. Wheat stems infested with puparia, brought in from far-western part of Cheyenne County on July 14, with the report that farmers in that area estimated the damage in some fields at 5 percent.

**WHEAT STEM MAGGOT (Meronyza americana Fitch)**

Minnesota. A. G. Ruggles (July 20): Many fields of wheat, barley, and rye have been badly damaged, one field showing from 20 to 30 percent injury.

**ARMYWORM (Cirphis unipuncta Haw.)**

Rhode Island. A. E. Stene (July 19): One outbreak of moderate severity reported from Portsmouth, Newport County.

Vermont. H. L. Bailey (July 25): No outbreaks reported. A few small specimens found under mowed oats at Bradford on July 7.

New York. N. Y. State Coll. Agr. News Letter (July 10): Moths observed at baited traps during the last 10 days in small numbers in comparison to those seen a year ago. A troublesome outbreak not forecast, but a mild and spotted infestation likely. (July 17): A few moths taken in light traps for a week or 10 days in Oswego County.

**APHIDS (Aphidae)**

Utah. G. F. Knowlton (July 13): Aphids damaging green oats in some fields examined at Springville and Mapleton. Most of the wheat and oats are maturing to the extent that aphids are leaving the plants.

Washington. L. G. Smith (June 27): Aphids found between kernels in heads of wheat south of Ralston, Adams County, on June 20, but no damage as yet. In Whitman County numerous reports of aphids on wheat from several sections. Practically all grain crops quite heavily infested in the LaCrosse and Endicott areas. Light infestation in Oakersdale-Tekoa area, although grain not so far advanced. In some fields every head is infested with a large number of aphids. (July 5): On June 23 grain aphids were seriously damaging some heads, but injury to fields of wheat and barley as a whole not serious in Granger, Yakima County.

**CORN**

**CHINCH BUG (Blissus leucopterus Say)**

Indiana. J. J. Davis (July 22): Appeared in destructive numbers in many areas in western Indiana, and caused considerable damage in several eastern counties, especially in Jay County and the eastern part of Adams.

C. Benton (July 20): Owing to the unusually early maturing of the small grains, chinch bug migration to corn began earlier than usual, starting about June 20 to 25. Some migration prolonged until the middle of July by nymphs held in the stubble by grass upon which they had been feeding. In most fields no barriers were constructed and others too late for much value, therefore the resulting injury to invaded corn ranged from light to moderate on the first few rows up to several acres severely injured, as in several places in Tippecanoe County. First newly transformed adults observed in the field on June 26. By end of June most of remaining nymphs had reached the fourth and fifth instars. Dispersal flight of the new-

brood adults first observed as starting on July 6. Dispersal considerably accelerated in many fields by nearly 5 inches of rain on July 17. Heavy rain apparently had little effect in reducing the numbers of bugs, which at the time were predominately new adults.

Illinois. W. P. Flint (July 22): Spotted areas of damage have occurred. Infestation extremely spotted, with no area of general infestation. Single fields here and there over the State show damage.

Michigan. R. Hutson (July 25): Small infestations at Adrian, Morenci, and Monroe.

Wisconsin. E. L. Chambers (July 24): Light infestations reported on grainfields in Pierce County.

Iowa. C. J. Drake (July 8): In the chinch bug area in Guthrie County, migration is about over from wheatfields, and a large proportion of the bugs in the winged stage. Many immature stages in oatfields. Rains affected the population more in the oats than in wheat, owing to the fact that many of the heavy rains took place during the hatching period in the oatfields, and some time after the greater part of the hatching in wheat and rye. Losses would have been tremendous had it not been for the rains. Some barriers built in southernmost parts of Story and Boone Counties, also in other counties in the fourth and fifth tiers. Infestation heaviest in the western quarter of the State, just the opposite of what it was during the outbreak of 1934. The heavy center of infestation in Iowa extends from Guthrie Center to Red Oak.

Missouri. L. Haseman (July 25): Scattered infestations reported last month over much of the western half and north-central parts of the State.

Nebraska. D. B. Whelan (June 27): One acre of hegari destroyed near Lincoln.

M. H. Swenk (July 15): Reported as damaging crops during most of period from June 21 to July 15. Particularly plentiful in the southeastern corner of the State. Barley fields injured more than other small grains and held the largest populations of young bugs prior to their migration. Many wheatfields heavily infested by the middle of June. Migration of young bugs out of small grainfields began on June 15, and by June 23 the heaviest movement was under way in extreme southeastern Nebraska, especially in Richardson, Pawnee, and Johnson Counties. Despite hard rains early in July, there remained some small grainfields and stubble still well populated with immature stages that had not started their migrations, and the period of movement of the young bugs was extended to beyond the middle of July. By contrast, in the drought year of 1934 migration began on June 16 and was over by July 10.

Kansas. H. R. Bryson (July 26): Chinch bug populations on the increase in the eastern half of the State on July 25. Adults caused severe injury to late corn and sorghums in Washington, Jefferson, Nemaha, Brown, Riley, Anderson, and surrounding counties. The situation has been somewhat different this year. The bugs reached maturity in the small fields, instead of migrating as nymphs at harvest time. Owing to difficulty of controlling them as

adults, they distributed themselves evenly over the rowed crops and deposited eggs at or near the base of each plant. Second-generation nymphs are in the second instar and may cause considerable injury. Damage is accentuated by the hot, dry weather, which has favored the young bugs but has retarded the growth of the plants.

Oklahoma. F. A. Fenton (July 24): Chinch bugs in barley at Sparks, in Lincoln County, and at Keystone, in Tulsa County. Infestation considered more severe than last year. Although winter survival approximately the same as a year ago, the unusually dry spring favored the development of the bugs. In many places, owing to the failure of the grain crop, sorghums were planted in the same field, with disastrous results. There has been an increase in grain and barley acreage in this State and, if this continues we look for serious trouble.

CORN LEAF APHID (Aphis naidis Fitch)

Illinois. R. A. Blanchard and J. H. Bigger (July 12): Doing serious damage to corn in a number of fields in Union and Alexander Counties. Tassels and upper parts of plants seriously affected in 20 to 25 percent of the plants in some fields.

CORN EAR WORM (Heliothis armigera Hbn.)

Connecticut. N. Turner (July 18): Only a few seen on sweet corn.

New York. N. Y. State Coll. Agr. News Letter (July 24): Readily found in most fields of sweet corn on Long Island, but injury less severe than usual. (July 17): On Long Island the earliest plantings of corn had infestation by the first brood, although in general infestations were relatively low. Peak of the first-brood infestation apparently past. In Columbia County a few corn ear worms, nearly full grown, were noted. In Rockland County ear worms have caused about a normal amount of injury, about 10 percent of the ears being infested.

Virginia. H. G. Walker and L. D. Anderson (July 27): At Norfolk sweet corn maturing about July 10 was severely damaged, whereas the same varieties maturing about 10 to 15 days later, were only slightly injured.

Alabama. J. M. Robinson (July 14): Reported on corn at Henagar, northeastern part of the State, on June 11.

Mississippi. C. Lyle (July 24): Damage reported as heavy in the east-central, southeastern, and Delta counties.

Illinois. J. M. Magner (June 27): Four acres of sweet corn in the Monsanto area a total loss owing to damage. Larvae of all stages observed in the ears, as many as four per ear.

Wisconsin. E. L. Chambers (July 24): Unusually abundant and attacking both sweet and field corn in the southeastern part of the State.

Missouri. L. Haseman (July 25): Rather unusual in its activity this summer, there being less tassel or bud infestation by the early brood than usual, but throughout the latter part of June and the first half of July there was an abundance of green larvae feeding in the open on tobacco, flowering tobacco, alfalfa, and other crops. Reports from various parts of the State. Early sweet corn showing considerable infestation.

Minnesota. A. G. Ruggles and assistants (July 20): Quite abundant on sweet corn. Some fields badly infested.

Nebraska. M. H. Swenk (July 15): Found to be clipping the silks of sweet corn in Madison County on June 24.

South Dakota. H. C. Severin (July 18): Abundant in sweet corn and doing considerable damage.

Utah. G. F. Knowlton (July 22): Reports of injury received from Farmington, northern Utah.

Washington. R. D. Eichmann (July 11): Early sweet corn at Prosser, Benton County, showed larvae in most ears on July 10.

J. C. Dodge (July 11): Larvae still very small on July 3 but had entered ears on a few plants in one field near Yakima.

H. P. Lanchester (July 18): Damaging corn in the vicinity of Walla Walla.

#### SOUTHERN CORNSTALK BORER (Diatraea cramboides Grote)

Maryland. E. N. Cory (July 20): Attacking corn generally over the State.

Virginia. W. J. Schoene (June 26): Several complaints received of very serious injury to corn in the southeastern section of the State east of Petersburg and near the James River. Corn almost totally destroyed. (Det. by C. Heinrich.)

C. R. Willey and F. R. Freound (July 5): Destroying sweet corn at Montross, Westmoreland County.

Alabama. J. M. Robinson (July 14): Found on corn at Henagar and Guntersville, on July 5, both in the northeastern part of the State.

#### EUROPEAN CORN BORER (Pyrausta nubilalis Hbn.)

Maine. J. Hawkins. (July 18): Adults emerged from July 9 to 15 at Unity. Half-grown larvae were taken on corn at Portland on July 18.

Connecticut. A. W. Morrill, Jr. (July 17): Widespread and severe in the Windsor area, attacking much corn and potatoes and nearly killing the potato vines. Also taken in many home gardens and observed on rhubarb.

N. Turner (July 18): First generation very abundant. Many fields of sweet corn so heavily infested that the crop was a total loss. First pupae found on July 6, indicating an exceptionally early second generation.

New York. N. Y. State Coll. Agr. News Letter (July 17): On Long Island infestations range from negligible to an average population of more than 800 borers per 100 plants in some fields. Pupation now about 12 percent. In Columbia County injuries in early corn variable, with some severe injury reported. Borers in harvested corn have ranged from individuals a few days old to those that have pupated. At present 2 percent of the larvae have pupated. Heavy infestation in Westchester, Rockland, Orange, Columbia Ulster, and Albany Counties, all in eastern New York.

New Jersey. C. A. Clark (July 17): In 29 fields of early sweet corn surveyed in northern Burlington County from July 5 to 11, the average number of borers per 100 plants was 416, as compared with 50 found in 21 fields examined in the same section in 1938. The maximum number of borers per 100 plants in 1 field was 969 in 1939 and 202 in 1938. On July 10-11, pupation of the first generation in sweet corn had reached 57 percent, and emergence 2 percent.

Indiana. J. J. Davis (July 22): An enormous increase in eastern Indiana over 1938.

Wisconsin. E. L. Chambers (July 24): Scouting, started on July 10, revealed egg masses and newly hatched larvae on corn in Sheboygan County, and six other counties now found to have infestations.

#### STALK BORER (Papaipema nebris nitela Guen.)

Maine. J. Hawkins (July 18): Numerous and destructive in many parts of the State. Injury largely confined to corn.

Vermont. H. L. Bailey (July 25): Unusually abundant on July 21 in a garden of sweet corn at Rutland, Rutland County, western Vermont.

Wisconsin. E. L. Chambers (July 24): Reported from most of the counties in southern Wisconsin as attacking corn, potatoes, tomatoes, and garden plants.

Minnesota. A. G. Ruggles and assistants (July 20): More reports of damage than for many years.

Iowa. H. E. Jaques (July): Found in Winnebago County, north-central Iowa.

Nebraska. M. H. Swenk (July 15): Heavily infesting a cornfield in Washington County, on July 6. The field had been in permanent pasture until this year.

FALL ARMYWORM (Laphyema frugiperda A. & S.)

Georgia. T. L. Bissell (June 15): Patch of corn at Experiment was well infested on May 19, and two moths reared on June 10. In previous years I never obtained moths before August. (Det. by J. F. G. Clarke.)

Mississippi. C. Lyle (July 24): The most general outbreak in several years during the month. Specimens or complaints received from all sections of State. Owing to much rain in June, there is an unusually large acreage of late corn, which is the chief host. Control measures being used.

SEED-CORN BEETLE (Acanthoderus lecontei Chaud.)

Nebraska. D. B. Whelan (July 15): Heavy flights at lights during the nights of June 26 and 27 in Lincoln.

GRAPE COLASPIS (Coccaspis brunnea F.)

Indiana. J. J. Davis (July 22): Following abundance of the larvae attacking corn, an abundance of adults is observed.

CORN SILK BEETLE (Luperodes brunneus Crotch.)

Louisiana. C. O. Eddy (July 25): The silk beetle of corn has increased its range in north-central Louisiana this year.

A SCARABAEID (Strigoderma arboricola F.)

Virginia. C. R. Willey and F. R. Freund (July 1): Specimen received from Hickory, Norfolk County, with the report that the beetle seems to work into the tassels of sweet corn.

ALFALFA

ALFALFA WEEVIL (Hypera postica Gyll.)

Montana. F. V. Lieberman (July 10): Larvae collected on June 28, in Big Horn County. This county was first found infested last year but, as specimens were lost, I am sending a shipment of larvae, to remove any doubt as to the occurrence of the weevil in Big Horn County.

Utah. C. J. Sorenson (July 18): Very abundant during the latter part of June and early in July in parts of Emery and Utah Counties.

California. A. E. Michelbacher (July 21): The second brood reached its peak in the San Joaquin Valley on June 26. Larvae collected per 100 sweeps of an insect net ranged from 2 to 2,000, while the range in the adult count was 1 to 112. The larval count on July 10 ranged from 9 to 375 and the adult count from 0 to 67. Very scarce around Pleasanton. In the fields adjacent to the San Francisco Bay it is not abundant. On July 7 the number of larvae collected per 100 sweeps for the different fields ranged from 3 to 65 and on July 15 from 1 to 36. Parasitization by Bathyplectes

curculionis Thoms., based on collections of last-instar larvae, in the San Joaquin Valley on June 16 ranged from 0 to 14.17 percent in the different fields. Since that time no parasitization noted. In the fields adjacent to the San Francisco Bay 14 percent of the last-instar larvae were found to be parasitized on June 22. No parasitization observed in the collections made on July 6.

PEA APHID (Macrosiphum pisi Kltb.)

Maine. J. Hawkins (July 18): A very light general infestation in central Maine developed into serious proportions but failed to injure peas extensively, owing in part to weather conditions, parasites, and predators.

New York. N. Y. State Coll. Agr. News Letter (July 3): While not generally destructive throughout the State, so abundant in some localities that crops in many fields were completely destroyed, severe damage extending over considerable areas, particularly on late varieties of peas where control measures were not effective. Injury in many localities was aggravated by prolonged periods of dry weather and by mosaic. In areas where the aphid was particularly abundant, control operations were started on June 5 and continued through most of the week beginning June 25. Aphids still abundant in fields of later planted peas.

Wisconsin. J. E. Dudley, Jr. (July 17): Relatively scarce at Madison and vicinity throughout June, owing to rains and natural enemies. Marked increase in population began about July 5 and continued until the infestation became heavy. Crop of peas already set and damage confined to tips of plants.

Minnesota. A. G. Ruggles and assistants (July 20): Abundant on peas at Le Sueur.

Washington. L. G. Smith (July 5): Moderate-to-severe damage on all peas in the Centralia district, with the exception of early peas. A low population there now. In the localities of Sequim and Joyce, Clallam County, a moderate infestation noted on vetch and a light infestation on green-pod and Austrian winter peas.

THREE-CORNERED ALFALFA HOPPER (Stictocephala festina Say)

Louisiana. C. O. Eddy (July 25): Now abundant.

A PLANT BUG (Adelphocoris lineolatus Goeze)

Minnesota. A. G. Ruggles and assistants (July 20): Very abundant on alfalfa and sweetclover in Todd County.

CLOVER

CLOVER APHID (Anuraphis bakeri Cowen)

Idaho. J. R. Douglass (July 20): A serious outbreak has occurred in south-central Idaho. Clover-seed growers using control measures.

CLOVER ROOT BORER (Hylastinus obscurus Marshan)

Idaho. J. R. Douglass (July 20): Serious injury to clover stands in south-central Idaho and numerous inquiries received.

CLOVER SEED MIDGE (Dasycnura leguminicola Lint.)

Montana. H. B. Mills (July 17): Clover nidge, probably D. leguminicola, extremely abundant and injurious in Lake County.

CLOVER HEAD WEEVIL (Tychius griseus Schaeffer)

New York. N. Y. State Coll. Agr. News Letter (July 3): Clover heads in some fields now showing the results of earlier injury by the immature stages. Reports of injury have come from Erie, Schuyler, and Seneca Counties. Insects now transforming to the pupal stage.

COWPEAS

COWPEA CURCULIO (Chalcodermus aeneus Boh.)

Georgia. T. L. Bissell (July 8): Much less abundant on snap beans in Spalding County, central Georgia, than a year ago. Infestation of cowpea pods first observed on June 19, earlier than any previous year, but the number of adults in peas now is light.

VETCH

VETCH BRUCHID (Bruchus brachialis Fahrneus)

Washington and Oregon. L. P. Leckwood (June 30): A survey to determine the limits of the area in the Pacific Northwest that is now infested began on April 17 and has continued to date. The following table shows the localities near which weevils have been found this year.

<u>State and county</u>	:	<u>Locality</u>
<u>Oregon:</u>	:	
Clackamas-----	:	Sandy, Orient, Boring, Damascus, Barton, Stafford, Wilsonville, Mulley, Tonquin, Red- lands, New Era, Canby, Barlow, Oregon City, Mulino, Aurora
	:	
Marion-----	:	Monitor, Donald, Champoeg, St. Paul, Mt. Angel, Silverton, Central Howell, Shaw, Aumsville, West Stayton
	:	
Washington-----	:	Beaverton, Tualatin, Orence, Hazeldale, Reed- ville, Laurel, Blooming, Hillsboro, Banks
	:	
Multnomah-----	:	Garden Home, Gresham
	:	
Yamhill-----	:	Dundee, Dayton, north of Newberg near River
	:	
Hood River-----	:	Hood River, Parkdale
	:	
Wasco-----	:	Mosier (Mr. Joe Schuh)
	:	
<u>Washington:</u>	:	
Clark-----	:	Washougal, Probstel, Orchards, Vancouver, Ridgefield
	:	
Cowlitz-----	:	Woodland (in seed in mill at Woodland, Sept. 1938)
	:	
Skamania-----	:	Stevenson
	:	
Klickitat-----	:	Husum (B. J. Landis & W. W. Baker), White Salmon
	:	

F R U I T I N S E C T S

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

New York. N. Y. State Coll. Agr. News Letter (July 24): More evident each day in infested orchards in Orleans County, western New York.

Wisconsin. E. L. Chambers (July 24): Reported for the first time from several localities in Marinette and Brown Counties.

South Carolina. J. A. Berly and M. B. Stevenson, Jr. (July 22): Apparently above normal in abundance in the sandhill area of the State.

SCURFY SCALE (Chionaspis furfura Fitch)

New York. N. Y. State Coll. Agr. News Letter (July 24): Summer crawlers appearing rapidly in the Hudson Valley, and on July 22 about 65 percent of the eggs had hatched.

APPLE

CODLING MOTH (Carpocapsa pomonella L.)

New York. D. W. Hamilton (July 21): Practically all spring-brood adults ceased coming to bait traps by July 1. First-brood adults began emerging in rearing cages at Poughkeepsie on July 13. Daily bait-trap captures increasing slightly since July 13. Peak captures expected the first week in August. Injury in the Hudson Valley by first-brood larvae the most prevalent observed during the last 4 years, especially in the Kinderhook area.

N. Y. State Coll. Agr. News Letter (July 17): In the Lake zone control will be necessary against first-brood worms until the end of July. Little or no second brood expected. Overlapping of broods expected in all other zones of western New York, as moths from both broods are now flying. Protection against first-brood larvae necessary through the third week of July.

Delaware. L. A. Stearns (July 22): Considerable early second-brood injury on apples just at harvest in the Bridgeville district. Second-brood activity started about July 11.

Virginia. W. S. Hough (July 22): Injury in northern Virginia in May severe for that time of year, but total injury not over the average.

A. M. Woodside (July 22): First-brood adults began emerging unusually early in Augusta County, bait-pail catches indicating that emergence started about June 27. Infestation of apples heavier than last season.

Indiana. L. F. Steiner (July 13): Activity of first-brood adults now at or near peak in the Vincennes area. Moth catches from July 5 to 13, inclusive, from 4 orchards and 310 traps totaled 4,846. Eggs now hatching in relatively large numbers. First-brood injury in well-sprayed orchards greater than in 1938. Counts made on 135 scattered trees in 2 orchards showed an average of 1.5-percent infestation. (July 20): Population counts today in the Vincennes area indicated that adult abundance is at the highest point, although bait catches have fallen off slightly.

Illinois. W. P. Flint (July 22): Second-brood hatch well under way in the southern half of the State. Second brood bunched, but not to the same extent as the first brood.

Michigan. R. Hutson (July 25): Second-brood larvae appeared July 19 to 21 in Monroe, Berrien, Calhoun, Van Buren, Allegan, and Kent Counties.

Minnesota. A. G. Ruggles and assistants (July 20): Very little injury.

Missouri. L. Haseman (July 25): Much less abundant than for several years over the State generally. Peak of second-brood moth abundance almost simultaneous throughout the State, ranging around July 1. This is normally a little ahead of schedule and July larval hatch reached a peak around July 8 to 15, but July larvae, especially in central Missouri, were not abundant.

Utah. G. F. Knowlton (July 5): Larvae found infesting cherry fruits at Ogden and in Weber County. (Det. by C. Heinrich.) Adult moths reared last year from larvae infesting cherry fruit in Utah County.

C. J. Sorenson (July 18): Moderately abundant.

Washington. L. G. Smith (June 27): At East Farms, Spokane County, from June 19 through June 22, 162 moths caught. In the Yakima Valley approximately 90 percent of the spring-brood moths had emerged by June 19. Peak of first-brood larvae entering fruit took place during the period May 29 to June 3. First larvae to leave the fruit taken on June 14. Large numbers of spring-brood eggs continuing to hatch.

E. R. Van Leeuwen (July 18): At Yakima the maximum deposit of eggs by spring-brood moths occurred on June 29, and large numbers deposited from June 29 to July 10, although number of moths caught in baits was relatively low. Maximum number of larvae entering the fruit at about the same period. First moth of the summer brood emerged on July 7.

#### PISTOL CASEBEARER (Coleophora malivorella Riley)

Maryland. E. N. Cory (May 31): Found on apple at Hancock, western Maryland.

Illinois. W. P. Flint (July 22): Hatching began in west-central Illinois about July 1. Infestation increasing over that of last year. Some orchards show an infestation averaging approximately 2 casebearers per leaf, with individual leaves showing as high as 20.

#### LEAF CRUMPLER (Mineola indigenella Zell.)

Minnesota. A. G. Ruggles and assistants (July 20): Very abundant on apple at Columbia Heights, near Minneapolis.

#### YELLOW-NECKED CATERPILLAR (Datana ministra Drury)

Missouri. L. Haseman (July 25): Although occurring 2 years ago in great abundance, only an occasional colony observed throughout central Missouri this year.

#### APPLE CURCULIO (Tachypterus quadrigibbus Say)

Missouri. L. Haseman (July 25): Feeding by adults continued into July, doing much damage to some varieties of apples throughout central Missouri.

### APHIDS (Aphidae)

Maine. F. H. Lathrop (July 20): Aphis pomi Deg. is more abundant in some orchards in York County than for at least 4 years. Infested leaves curled, but apparently no severe injury to trees or fruit. Tree growth slowing down and various natural enemies present.

New York. N. Y. State Coll. Agr. News Letter (July 3): Green aphids appearing in large numbers on terminal growth and fruits in Dutchess County, eastern New York. Green aphids apparently increasing in Niagara County, and found on a few fruits in all orchards in Clinton County, western New York. (July 24): In western New York, green aphids still abundant in Niagara County, with very little parasitization evident. In Orleans and Wayne Counties very numerous and causing considerable damage. Terminal growth and some apples attacked. (July 17): The rosy apple aphid (Anuraphis roseus Baker) is almost gone in western New York, where a great deal of injury has occurred.

Virginia. W. S. Hough (July): Rosy apple aphid caused little or no injury on untreated trees in the Winchester apple-growing area, northern Virginia, but 50 miles south the injury ranged from moderate to very severe on untreated trees, and damage in commercial orchards varied according to control measures employed in March and April.

### WOOLLY APPLE APHID (Eriosoma lanigerum Hausm.)

New York. M. D. Leonard (June 30): Light infestation on several apple trees at Flushing.

### BOXELDER BUG (Leptocoris trivittatus Say)

Utah. G. F. Knowlton and F. C. Harmston (July 11): Severely injuring ripening apples on a few trees at Meadow, Millard County.

### APPLE MAGGOT (Rhagoletis pomonella Walsh)

Connecticut. P. Garman (July 22): Present in about the usual numbers in apples in New Haven County. Emergence somewhat earlier than usual.

### A BEETLE (Euphoria fulgida F.)

Iowa. J. M. Bechtel (July 5): Found feeding on a few apples at Hamburg; as many as 5 or 6 per apple. (Det. by E. A. Chapin.)

### PEACH

### ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)

Connecticut. P. Garman (July 22): First generation unusually heavy. Second generation much less abundant.

South Carolina. O. L. Cartwright (July 22): Infestation of early and midseason peach fruits averaging about normal, although reported as above normal in some localities.

Georgia. O. I. Snapp (July 20): Of 870 ripe Hiley peaches from the station orchard at Fort Valley, 141, or 16.2 percent, found infested and of 2,141 ripe Georgia Belle peaches from the same orchard, 553, or 25.8 percent, found infested, as contrasted to 11 out of 4,600, or 0.24 percent, of ripe Elberta peaches in a commercial orchard near Fort Valley. Late peaches and apples furnish a host for hibernating broods of larvae in the station orchard, but they are not available in the commercial orchards in central Georgia. Infestation in the station orchard now somewhat heavier than that of an average year, but not in commercial orchards.

Mississippi. C. Lyle (July 24): Reports of injury to apple and peach in Carroll, Hinds, and Simpson Counties received between June 26 and July 6. Said to be abundant in the east- and west-central counties, and in the northeastern counties practically all young peach orchards show injury.

Indiana. L. F. Steiner (July 13): Adults coming to codling moth traps in the Vincennes area at the rate of 15 to 30 per day since July 1. Catch today was 52.

Missouri. L. Haseman (July 25): Less abundant in the peach areas of southeastern Missouri than usual. Some breeding experiments at Cape Girardeau showed 83-percent parasitization, mostly by native parasites. More damage than usual in the Saint Louis area.

#### PEACH TWIG BORER (Anarsia lineatella Zell.)

Texas. R. K. Fletcher (July 22): Peach trees seriously injured on a farm in Cherokee County on July 10.

Utah. C. J. Sorenson (July 18): Moderately abundant in Davis, Box Elder, and Utah Counties.

Washington. E. W. Jones (July 1): Fruits of apricot damaged at Walla Walla.

#### PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Maryland. E. N. Cory (July 7): Found in small peaches and plums in Baltimore County.

Virginia. A. M. Woodsidge (July 22): Adults of the summer brood began to emerge at Crozet about July 1. A few of the females contain eggs.

Georgia. O. I. Snapp (July 20): First mature second-generation eggs found in females on June 26 and first eggs found in peaches on June 28. Eggs from first-generation adults that emerged during the period May 31-June 5. Second-generation egg deposition began 13 days later than in 1938. Second-generation eggs deposited by 46.3 percent of the new beetles by July 19. Georgia Belle and Elberta peaches in central Georgia attacked by a heavy infestation of second-generation larvae that damaged much fruit. Adult population now heavier than that of an average year.

Mississippi. C. Lyle (July 24): Reported as abundant in the east- and west-central counties. Practically all peaches show some infestation.

Michigan. R. Hutson (July 25): Injury very noticeable in Saint Joseph and Berrien Counties, and in all fruit-growing areas in the southern half of the Lower Peninsula.

Minnesota. A. G. Ruggles and assistants (July 20): Moderately abundant.

Texas. R. K. Fletcher (July 22): Considerable damage to plums in an orchard in Tarrant County.

#### CHEERY

##### PEAR SLUG (Caliroa cerasi L.)

Nebraska. M. H. Svenk (July 15): Branch from a cherry tree showing injury received from Scotts Bluff County on July 12.

Utah. G. F. Knowlton (July 4): Severely skeletonizing some ornamental Crataegus sp. in gardens at Logan. (July 7): Cherry foliage damaged at Farmington and throughout orchard districts of Utah County.

Washington. L. G. Smith (July 11): Young cherry and plum trees in Clark County nearly stripped of leaves. Many home orchards attacked.

##### BLACK CHERRY APHID (Myzus cerasi F.)

New York. N. Y. State Coll. Agr. News Letter (July 3): Abundant on some sour cherry trees in Monroe County, western New York.

Utah. G. F. Knowlton (July 10): Much less abundant in curled cherry leaves at Farmington, than usual.

Montana. H. B. Mills (July 17): Hardly a problem in the cherry area of Flathead and Lake Counties.

##### CHERRY FRUITFLIES (Rhagoletis spp.)

New York. D. W. Hamilton (July 21): The last adult of R. cingulata Loew taken in emergence cages at Hudson, Columbia County, on July 1. Injury prevalent in unsprayed orchards.

Washington. H. J. Wood (June 27): First cherry fruitflies seen in the southern part of Spokane on June 21, although possibly some were out earlier.

Oregon. S. C. Jones (June 26): Peak of emergence of R. cingulata reached on June 15 in the Willamette Valley. Eggs found in the field on June 16, and maggots on June 23. (July 20): Last flies emerged in cages on July 7.

##### FLOWER THRIPS (Frankliniella tritici Fitch)

Indiana. J. J. Davis (July 22): Sweet cherries damaged in an orchard in Elkhart County. Thrips fed between contacting fruits, causing abrasions.

PEAR

PEAR PSYLLA (Psylla pyricola Foerst.)

New York. N. Y. State Coll. Agr. News Letter (July): Some injury being caused in Columbia and Dutchess Counties, in the Hudson River Valley. Populations building up considerably in Niagara, Orleans, and Wayne Counties, western New York.

Washington. L. G. Smith (July 26): Specimens collected in Spokane County on July 18. The survey, made on July 25, showed infestation present in the following districts of Spokane County: Vera, Opportunity, Greenacres, Otis Orchards, East Farms, and Green Bluff. Vera district most heavily infested, with severe damage, apparently the center of infestation, with the infestation decreasing to only a trace in the surrounding districts. The Greenacres area is about 15 miles north of Vera, with an open crop prairie in between the two districts. (Det. P. W. Oman.)

PLUM

RUSTY PLUM APHID (Hysteroneura setariae Thos.)

New York. N. Y. State Coll. Agr. News Letter (July 3): Several severe cases seen in Niagara County, the fruit stems being covered. Most orchards have them only on the terminal leaves, and many winged forms now appearing.

RASPBERRY

RASPBERRY FRUITWORM (Byturus unicolor Say)

Minnesota. A. G. Ruggles and assistants (July 20): More damage done to young raspberry plants than ever seen in the State. Damage particularly evident around Minneapolis and Saint Paul, but reports received from all over the State.

Michigan. R. Hutson (July 25): Considerable damage caused in a planting of red raspberries at Clarkston, southeastern Michigan.

STRAWBERRY ROOT WEEVIL (Brachyrhinus sp.)

Utah. G. F. Knowlton (July 18): All raspberry patches examined in Utah County found to be infested.

GOOSEBERRY

APHIDS (Aphididae)

Nebraska. D. B. Whelan (June 22): Currant aphid (Capitophorus ribis L.) fairly numerous on leaves of currant at Big Springs, Deuel County, southwestern Nebraska.

Utah. G. F. Knowlton (July 22): Currant and gooseberry apical leaves severely curled in numerous localities this spring. Injury most commonly due to Aphis varians Patch.

GOOSEBERRY FRUITWORM (*Zophodia convolutella* Hbn.)

Utah. G. F. Knowlton (July 21): Gooseberry and raspberry fruits injured at Willard and Utah Hot Springs.

GRAPE

GRAPE LEAFHOPPERS (*Erythroneura* spp.)

Ohio. G. A. Runner (July 20): Summer brood generally quite abundant in the Sandusky and Lake Erie Islands area, averaging about the same as during the corresponding period in 1938. Vigorous vine growth this season has distributed feeding, and damage in most localities not severe.

Nebraska. M. H. Swenk (July 15): Grape leafhopper, E. comes Say, found to be severely attacking woodbine vines in Antelope County on June 23.

Montana. H. B. Mills (July 17): The Virginia creeper leafhopper (E. comes ziczac Walsh) is causing much less injury to Virginia creeper vines in Gallatin County than for several years. Many of the eggs are dying within the leaf tissues. First nymphs seen on July 10.

GRAPE PHYLLOXERA (*Phylloxera vitifoliae* Fitch)

Wisconsin. E. L. Chambers (July 24): Reported from home gardens in several localities.

GRAPE ROOTWORM (*Fidia viticida* Walsh)

Ohio. G. A. Runner (July 20): Feeding marks on the grape foliage in the Sandusky area indicate some increase in abundance, as compared to 1938, although in most vineyards observed the infestation is light.

GRAPE LEAF FOLDER (*Desmia funeralis* Hon.)

Missouri. L. Haseman (July 25): In the last 10 days, apparently throughout the State, a sudden, unusually heavy outbreak has shown up, doing much damage in some vineyards, even where regular treatments were previously applied.

GRAPE LEAF SKELETONIZER (*Harrisina americana* Guer.)

New York. N. Y. State Coll. Agr. News Letter (July 3): Grape leaves observed in Rockland County, eastern New York, severely infested on June 30.

GRAPE BERRY MOTH (*Polychrosis viteana* Clem.)

Ohio. G. A. Runner (June 30): Solenopsis molesta Say and Crematogaster lineolata var. near cerasi Fitch destroy pupae of the grape berry moth. The former almost completely destroyed about 10,000 overwintered pupae in lots of 500

in field cages in an experimental vineyard in the Sandusky area; found to be abundant and well distributed over the farm. (Ants det. by M. R. Smith.) (July 20): Infestation of the grape berry moth in the Sandusky area, as indicated by first-brood abundance, somewhat spotty and generally lighter than in 1938, although very heavy infestations occur in some vineyards. Emergence of the first brood considerably earlier than usual.

GRAPE COLASPIIS (*Colaspis brunnea* F.)

Missouri. L. Haseman (July 25): Unusually severe in June and feeding continued into July, but since the middle of the month very little evidence of them.

Louisiana. C. O. Eddy (July 25): Building up gradually.

SIX-SPOTTED GRAPE BEETLE (*Pelidnota punctata* L.)

Nebraska. D. B. Whelan (July 15): Adults common around lights at Lincoln late in June and early in July, particularly on June 14 and July 5.

M. H. Swenk (July 15): Specimen received from Furnas County on June 3.

PECAN

PECAN PHYLLOXERA (*Phylloxera devastatrix* Perg.)

Mississippi. C. Lyle (July 24): Specimens of serious injury to pecan received from Yazoo County on July 5.

PECAN NUT CASEBEARER (*Acrobasis caryae* Grote)

Florida. S. O. Hill (July 21): Very scarce, at least about Monticello.

Texas. C. B. Nickels and W. C. Pierce (June): Field records show the extent of the destruction of the pecan crop by first-generation larvae to be as follows: Bastrop, 33 percent; Crystal City, 90 percent; Elgin, 55 percent; and Lytle, 55 percent. Pecan crop produced in 1938 at all of these localities in southern Texas. Less than 10 percent of the nuts destroyed in orchards in central Texas, which produced few or no nuts during the preceding year.

WALNUT

WALNUT CATERPILLAR (*Datana integerrima* G. & R.)

Michigan. R. Hutson (July 25): Just beginning to be noticeable in Kalamazoo, Lansing, Detroit, and Monroe.

Missouri. L. Haseman (July 25): Only an occasional colony appeared throughout central Missouri, and no complaints received from other parts of the State. Larvae matured and pupation occurred during the early days of July.

Tennessee. G. M. Bentley (July 21): Damage done to walnut and persimmon foliage in Lawrence and Davidson Counties on July 5 and 11. Trees being defoliated in some places.

Oklahoma. R. G. Dahms (July 25): Some injury to pecans reported from southwestern Oklahoma.

FILBERT

APHIDS (Aphidae)

Washington. L. G. Smith (July 11): A severe infestation noted on the undersides of leaves of all filbert trees in Clark County on June 30. Average was 200 aphids per leaf. An abundance of ladybeetles present.

CITRUS

BLACK SCALE (Saissetia oleae Bern.)

California. R. S. Woglum (July): Widespread and marked increase is the outstanding feature of the citrus-insect-post situation this summer. All orange districts show a definite increase.

A WEEVIL (Epicaerus formidolosus Boh.)

Florida. J. R. Watson (July 21): Sent in from Polk County, where it was doing serious damage to citrus trees in a young grove.

FIG

THREE-LINED FIG TREE BORER (Ptychodes trilineatus L.)

Louisiana. T. E. Snyder (July): Trunks of fig trees at New Orleans disfigured and weakened generally.

PAPAYA

PAPAYA WEBWORM (Homalopalpia dalera Dyar)

Florida. J. R. Watson (July 21): Sent in from Osceola County, where it was reported as destructive to papaya blossoms.

A PAPAYA HORNWORM (Eriynyis sp.)

Florida. H. Spencer (July 21): Fullgrown larvae of Eriynyis sp., probably alone Dr., collected on small papaya plants at Fort Pierce. Foliage stripped from plants in several hills.

GUAVA

A WEEVIL (Anthonomus costulatus Suffr.)

Florida. J. R. Watson (July 21): Sent in from Dade County, where it was reported as attacking guavas, particularly Cattley.

T R U C K - C R O P I N S E C T S

STRIPED CUCUMBER BEETLE (Diabrotica vittata F.)

Maine. J. Hawkins (June 15): Squash and cucumber badly injured in many localities. Squash was in all cases the preferred host.

Vermont. H. L. Bailey (July 25): Reports of unusual abundance in Washington and Chittenden Counties. Large field of squash badly damaged at Richmond, western Vermont. Most adults disappeared on July 18.

Alabama. J. M. Robinson (July 14): Abundant around Auburn.

Mississippi. C. Lyle (July 24): Reports of injury to watermelons and cantaloups received from Chickasaw County on July 18 and from Lauderdale and Hinds Counties on July 22. Infestation very light in the commercial pickle areas.

Minnesota. A. G. Ruggles (July 20): Moderately abundant.

Missouri. L. Haseman (July 25): Less abundant over the State generally this year, but on young cucurbit crops has caused some damage during the month. In the melon section of southeastern Missouri less destructive than usual.

Nebraska. M. H. Swenk (July 15): Reports of damage to cucurbit plants received from Richardson, Otoe, Saline, and Merrick Counties from June 23 to July 5, inclusive.

CARROT BEETLE (Ligyrus gibbosus Deg.)

Minnesota. A. G. Ruggles (July 20): Very abundant on sunflower and cabbage at Minneapolis.

RED TURNIP BEETLE (Entomoscelis adonidis Pallas)

Minnesota. A. G. Ruggles (July 20): Moderately abundant on beans, peas, and carrots at Wadena.

BLISTER BEETLES (Meloidae)

Virginia. H. G. Walker and L. D. Anderson (July 27): Reported as rather abundant on tomatoes in Princess Anne County.

Indiana. J. J. Davis (July 22): Reported as damaging sugar beets, potatoes, and various garden-vegetable crops in many places in the northern half of the State.

Michigan. R. Hutson (July 25): Reported as feeding on potatoes near Detroit. Margined blister beetle (Epicauta marginata Say) reported as feeding on garden plants at Niles.

Missouri. L. Haseman (July 25): Continually attracting attention during July throughout the State.

A. C. Burrill (July 4): Striped blister beetle (E. vittata F.) and gray blister beetle (E. cinerea Forst.) found in home gardens in Jefferson City.

Minnesota. A. G. Ruggles (July 20): Macrobasis unicolor Koy. abundant on potatoes and other crops in various parts of the State.

North Dakota. J. A. Munro (July 20): Damage to potato vines, clovers, and caragana hedges reported from scattered points in the State.

South Dakota. H. C. Seyerin (July 18): One of the major insect pests in South Dakota. Greatest amount of damage done to gardens and potatoes. In western part of the State beetles doing much damage to sugar beets.

Kansas. H. R. Bryson (July 26): Abundant in alfalfa fields on July 19. One record of beetles defoliating small trees at Monument, and causing injury to garden crops at Clifton.

Nebraska. M. H. Swenk (July 15): Several species reported. Infestation centered in eastern Nebraska, a few reports coming from south-central and northwestern Nebraska.

Utah. G. F. Knowlton (July 14): Spotted blister beetle (E. maculata Say) very abundant in gardens west of Randolph, Rich County, northern Utah, destroying garden plants.

Washington. J. C. Dodge (July 11): Severe damage to sugar beets over a small area 10 miles west of Wapato, Yakima County, on June 21.

TOBACCO THRIPS (Frankliniella fusca Hinds)

Connecticut. A. W. Morrill, Jr. (July 17): Heavy infestations observed in some fields in Windsor area, but general infestation apparently normal.

FALSE CHINCH BUG (Nysius ericae Schill.)

Florida. J. R. Watson (July 21): Sent in from Key Largo, where it was stated to be a serious pest of pineapples.

Minnesota. A. G. Ruggles (July 20): Reported as abundant in various parts of the State.

Montana. H. B. Mills (July 8): More abundant than last year at Choteau, Teton County. Moderate damage to peas, beans, turnips, radishes, and potatoes. (July 17): Locally injurious to alfalfa, wheat, clover, strawberries, lettuce, and other truck, but is disappearing rapidly, at least west of the Divide.

SOUTHERN GREEN STINKBUG (Nezara viridula L.)

Alabama. J. M. Robinson (July 14): Reported on beans at Notasulga on June 30.

Mississippi. C. Lyle (July 24): Nymphs received from Simpson County on July 14 and from Holmes County on July 19 and reported as feeding on lima beans.

POTATO AND TOMATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

Maine. G. W. Simpson (July): Causing more damage than usual in Aroostook County.

South Carolina. F. Sherman (July 22): More than normally abundant in western half of State. Eggplants defoliated.

Minnesota. A. G. Ruggles (July 20): Moderately abundant.

Missouri. L. Haseman (July 25): More destructive early in the season than for many years, and since the middle of July injury to late potatoes quite serious in central and east-central Missouri.

North Dakota. J. A. Munro (July 20): More abundant than observed since 1936. Larvae began to appear on potato vines during the first week of July.

South Dakota. H. C. Severin (July 18): Evidently returning and in some fields has done an unusual amount of damage.

Idaho. R. W. Haegeler (July 17): Infestations in southwestern Idaho heavy and perhaps a little more widespread than in 1938. Damage light, but control measures necessary to prevent losses.

J. R. Douglass (July 20): Infestations still showing up, and doing light damage on the western end of the Twin Falls irrigated tract. Beetle first made its appearance in this area last season, and efforts being made to clean up the infestation.

POTATO FLEA BEETLES (Epitrix spp.)

Maine. G. W. Simpson (July): Flea beetles survived the winter in larger numbers than during the last 3 years in Aroostook County.

Connecticut. A. W. Morrill, Jr. (July 17): Second-generation emergence of E. cucumeris Harr. moderate but not heavy. Showed up one week early.

N. Turner (July 18): Adults of E. cucumeris emerging in large numbers during the last few days. Serious damage to early potatoes.

New York. N. Y. State Coll. Agr. News Letter (July 3): Severe infestation of potato flea beetles in Erie County, western New York. More numerous than during the last 3 years.

Indiana. J. J. Davis (July 22): E. cucumeris damaged potatoes early in July.

North Dakota. J. A. Munro (July 20): The potato flea beetle was abundant on potato fields in the vicinity of Fargo and moderately abundant at Park River. First injury to leaves appeared late in June.

Washington. L. G. Smith (July 5): Foliage of potato and tomato plants in the Willapa Valley severely perforated by E. cucumeris on June 26. (July 11) Early planted potatoes at Ridgefield, Clark County, had tubers damaged by

larvac, which left them by June 30. At Montesano and Elma, Grays Harbor County, potato flea beetles were causing severe damage to early potatoes and attacking tomatoes on June 27.

POTATO STALK BORER (Trichobaris trinotata Say)

Maine. G. W. Simpson (July): More abundant than usual in Aroostook County. One field at Caribou reported with an infestation affecting 5 percent of the plants.

CORN EAR WORM (Heliothis armigera Hbn.)

South Carolina. F. Sherman and J. A. Berly (July 22): Infestation of tomato fruits apparently above normal.

Mississippi. C. Lyle (July 24): Injury to tomato in central Mississippi. E. W. Dunnam, et al. (July 1): Few found in tomatoes in Washington County.

Tennessee. G. M. Bentley (July 21): Reported as doing considerable damage to tomatoes in the Memphis section of Shelby County. Many growers losing 65 percent of their crops.

Ohio. H. C. Mason (July): Counts made of wormy, injured fruits of early market staked tomatoes at South Point late in June revealed an average of 21 percent of the fruits damaged.

Indiana. H. C. Mason (July): Considerable injury in unstaked early market tomatoes in the Decker area of Knox County on June 29. In 3 plantings larval injury to fruit ranged from 19.7 to 28.2 percent. On tomatoes which were considerably later in the same area, only an occasional egg or larva was found.

J. J. Davis (July 22): Unusually destructive to early tomatoes in Vigo County early in the month.

Nebraska. M. H. Swenk (July 15): Attacking tomato fruits in Richardson and Saline Counties on June 23 and 26, respectively.

Washington. L. G. Smith (July 11): In Benton County green tomatoes, 1 to 2 inches in diameter, show injury.

POTATO TUBER WORM (Gnorimoschema operculella Zeli.)

Virginia. H. C. Donohoe (July 15): Within last few days reports of attack on barreled and sacked potatoes on the Eastern Shore have been numerous. An examination of one car on July 10 showed from 3 to 4 percent infestation. Car loaded for several days at this time. Reexamination of the same car on July 14 showed an infestation of 40 percent.

TOMATO PINWORM (Gnorimoschema lycopersicella Busck)

California. A. F. Howland (July 20): In Los Angeles County fruit showing from 0 to 2 percent pinworm, except for 3 fields in San Pedro Hills area where parts of the fields showed as high as 15 percent injury. Some of the fields at Vista, San Diego County, showed as high as 7 percent injury. In the hill areas of Orange County 3 percent of the fruit found infested--very low for this time of the year.

HORNWORMS (Protoparce spp.)

Virginia. H. G. Walker and L. G. Anderson (July 27): Rather abundant on the Eastern Shore during the early part of July, but prompt control measures prevented them from causing much damage.

Indiana. J. J. Davis (July 22): Reported as abundant in tomato fields in many sections of the State.

Idaho. J. R. Douglass (July 20): Several larvae of tobacco worm (P. quinquemaculata Haw.) collected from tomatoes on experimental plots near Buhl. Damage light.

Utah. G. F. Knowlton (July 10): Few tomato worms found on tomato plants near Provo. Some damage to tops.

Washington. L. G. Smith (July 11): Eggs being laid and young worms hatching on July 7 in the Spokane Valley. No great numbers found, and little damage has occurred.

POTATO APHID (Macrosiphum solanifolii Ashm.)

Connecticut. N. Turner (July 18): Several acres of early potatoes in Fairfield County heavily infested and some fields killed. Infestation reported as unusually heavy in late potatoes in the Connecticut Valley. Growers applying control measures.

New York. N. Y. State Coll. Agr. News Letter (July 24): Abundant on Long Island and in western New York, in Chautauqua and Wayne Counties.

Idaho. J. R. Douglass (July 20): Heavy infestation and severe damage at Filer.

POTATO LEAFHOPPER (Empoasca fabae Harr.)

Connecticut. N. Turner (July 18): Much more abundant than in 1938. Unsprayed potatoes show severe tip-burn.

New York. N. Y. State Coll. Agr. News Letter (July 17): Increasing in numbers on Long Island, and hopperburn becoming apparent and serious in some fields where few control measures have been used. In Orange County leafhopper injury very severe in all fields examined.

Indiana. J. J. Davis (July 22): Noticeably abundant and destructive, especially in northern half of State.

Minnesota. A. G. Ruggles (July 20): Very abundant in the State.

South Dakota. H. C. Severin (July 18): Doing much damage to potatoes over the State.

SIX-SPOTTED LEAFHOPPER (Macrostelus divisus Uhl.)

New York. N. Y. State Coll. Agr. News Letter (July 17): On July 10, while examining potato fields in Erie County, a new disease of potatoes for the State of New York was found in an early planting on a farm near Boston. Approximately 15 percent of one variety affected, while only 2 percent of the other variety showed symptoms. This disease is believed to be a form of western aster yellows, transmitted by the aster leafhopper which has been found feeding on many different plants.

A MIRID (Enzytatus geniculatus Reut.)

Georgia. T. L. Bissell (July 18): All stages common on garden tomatoes at Experiment. Present in winter greenhouse tomatoes. Also found two stalks of tobacco (no other in vicinity) infested, but none found on pepper. Tomato plants with brown rings on stems, or girdles, caused by feeding. Bugs believed to prevent fruit setting. (Det. by H. H. Knight.)

BEET LEAFHOPPER (Eutettix tenellus Bak.)

Utah. G. F. Knowlton (July 22): Tomatoes in fields examined at Willard, Tremonton, and Brigham only 1 to 4 percent infested with curlytop disease, which is lower than average.

POTATO AND TOMATO PSYLLID (Paratrioza cockerelli Sulc.)

Montana. H. B. Mills (July 17): Causing considerable injury to potatoes in parts of Yellowstone County. It is accompanied in small numbers by the psyllid Aphalara calthae L. and several other unidentified species.

BEANS

MEXICAN BEAN BEETLE (Epilachna varivestis Muls.)

General. N. F. Howard (July 17): Injury to beans was evident late in June throughout southern Ohio, Kentucky, eastern Tennessee, and the Carolinas, as far as Charleston, S. C.

Maine. J. Hawkins (July 18): Reported as being more prevalent than usual at this time of year.

Connecticut. N. Turner (July 18): Damage as usual.

New York. N. Y. State Coll. Agr. News Letter (July 10): Few beetles and egg masses present in southern Tompkins; northern Chemung, Tioga, Schuyler, southern Yates, southern Seneca, Cortland, and Cayuga Counties. In Steuben and Allegany Counties a greater number of fields heavily infested. Control necessary from July 12 to 15. Same true for the Castile section of

Wyoming County. Eggs hatching in Livingston County. Infestation light in Monroe County except in vicinity of Rochester. Beetles found for the first time north of Auburn in Cayuga County on July 5. Examination on July 6 in south end of county showed bean beetle in two or three fields. Last year one 2-acre field was all but destroyed. Adults readily found in Wayne County. (July 17): Moderate infestation in Steuben and Schuyler Counties.

Delaware. L. A. Stearns (July 22): Injury general and about normal. First brood mature on July 13.

Virginia. A. M. Woodside (July 22): First-generation adults now emerging.

Georgia. E. E. Rogers (July 22): Exceptionally heavy infestation noted on beans at Valdosta on July 14.

Alabama. J. M. Robinson (July 14): Reported for the first time in Choctaw County which adjoins Sumter County, where it was reported last month for the first time.

Mississippi. C. Lyle (July 24): Specimens received from Chickasaw, Covington, Lee, and Yalobusha Counties between June 19 and July 18. Reports of injury received from Clarke, Clay, Jasper, Jones, Lauderdale, and Oktibbeha Counties. Other reports indicate a general infestation in the east-central counties, with heavy damage. In the northeastern counties reports indicate most of late beans as destroyed.

Louisiana. C. O. Eddy (July 25): Has increased from a single isolated infestation in Bogalusa in 1938 to an area 4 miles in diameter.

Kentucky. W. A. Price (July): Some damage to soybeans in the vicinity of Lexington in July.

Tennessee. G. M. Bentley (July 21): Untreated garden beans badly damaged on July 15. Reports received from Davidson, Lawrence, and Weakley Counties. A field of cowpeas at Lawrenceburg reported as heavily damaged.

Ohio. N. F. Howard (July 14): Adults of second brood (first adult progeny of overwintered beetles) very numerous and depositing eggs in large numbers at South Point. Early, untreated beans have been defoliated.

Indiana. J. J. Davis (July 22): Very abundant and destructive in most parts of the State.

Michigan. R. Hutson (July 25): Reported as feeding on snap beans at Sandusky, Bad Axe, Monroe, Adrian, Jackson, Lansing, St. Joseph, Allegan, and Grand Rapids.

Missouri. L. Haseman (July 25): Seems to have spread and caused some damage in new areas in southeastern Missouri, but generally over the infested area it is less harmful than last year.

Utah. G. F. Knowlton and F. C. Harmston (July 20): Injury severe on garden beans and less severe on larger commercial plantings in the Price-Wellington area of Carbon County.

BEAN LEAF BEETLE (Cerotoma trifurcata Forst.)

Kentucky. W. A. Price (July): Some damage to soybeans during July in the vicinity of Lexington.

Missouri. L. Haseman (July 25): Attracting considerable attention during July in scattered gardens, some growers in central Missouri reporting serious damage on late beans.

Louisiana. C. O. Eddy (July 25): Abundant in southern Louisiana.

BEAN APHID (Aphis rumicis L.)

New York. N. Y. State Coll. Agr. News Letter (July 17): Prevalent on lima beans on Long Island, and many growers using control measures.

Idaho. J. R. Douglass (July 20): Complaints of moderate damage to lima beans and squash received from various growers around Twin Falls.

Utah. G. F. Knowlton (July 13): Aphids seriously damaging from 5 to 15 percent of lima bean plants in fields examined at Mapleton and southeast Springville.

LIMA BEAN VINE BORER (Monoptilotra pergratialis Hulst)

Maryland. E. N. Cory (July 7): Attacking beans at Jesterville, Wicomico County.

BEAN THRIPS (Hercothrips fasciatus Perg.)

Utah. G. F. Knowlton (July 13): Injuring young bean plants in some fields in the Murray-Sandy-Draper area of Salt Lake County.

PEAS

PEA APHID (Macrosiphum pisi Kltb.)

Idaho. R. W. Haegeler (July 17): Infestations in red clover in southwestern Idaho more widespread than usual. Moderate-to-light damage. Control measures necessary in some districts.

Utah. G. F. Knowlton (July 10): Abundant on young alfalfa in North Logan, counts running as high as 150 aphids per sweep of an insect net. (July 13): Injury to garden peas apparent in many fields in Cache, Utah, Weber, and Box Elder Counties. All peas harvested, but yield and quality reduced in the more seriously infested areas. Little control work carried on, despite heavy aphid populations on canning peas in many districts. Some aphids at Smithfield died of disease. (July 22): Still high in some alfalfa fields, particularly in cooler valleys, while, in general, populations are low in warmer valleys.

Washington. L. G. Smith (July 11): Spots of damage noted in several fields of canning peas in the Blue Mountain district of Columbia and Walla Walla Counties on July 10. Damage light. Severe infestations beginning as canning peas were coming into bloom on June 27 at Montesano, in Grays Harbor County. In Clark County severe injury already done to pod peas, with a low population on June 30.

C. B. Whiting (July 19): Attacking canning peas around Mount Vernon. Damage probably generally greater in this county than a year ago.

L. G. Smith (July 15): Aphids have done severe injury to canning peas in Grays Harbor County. It is estimated that the yield has been reduced at least 50 percent.

#### PEA WEEVIL (*Bruchus pisorum* L.)

Michigan. R. Hutson (July 25): Reported as infesting garden peas at Lansing, Howell, Monroe, Jackson, Owosso, and Kalamazoo.

Idaho. T. A. Brindley (July 11): Little damage to first peas processed on June 30 from peas grown in the Palouse area of Idaho and Washington. (July 18): Weevils beginning to die off on July 15 at Moscow.

Utah. G. F. Knowlton (July 7): Damaging peas at Butlerville and Sandy.

Washington. L. G. Smith (June 27): Adults and eggs found on pod peas in Thurston County. (July 5): On June 26 in the Willapa Valley, Pierce County, green pod peas had from 1 to 4 pea weevils in each pod. Pods were just filling and peas still in bloom. (July 11): Severe damage to pod peas in Clark County, on June 30. From 4 to 6 eggs found on every pod. Some eggs hatched, and larvae were in seeds.

#### CABBAGE

#### APHIDS (*Aphididae*)

New York. N. Y. State Coll. Agr. News Letter (July 24): Cabbage aphids generally abundant on up-State field cabbage and quite noticeable in Ontario, Monroe, and Orleans Counties, western New York.

Washington. L. G. Smith (July 5): Cabbage aphids just starting on tips of cabbage seed stalks in the Willapa Valley, Pacific County. Ladybeetles and syrphus flies abundant. (July 11): Colonies just becoming established on tips of seed cabbage stalks in Grays Harbor County. Growth too far advanced for aphids to do much damage.

#### HARLEQUIN BUG (*Murgantia histrionica* Hahn)

South Carolina. F. Sherman (July 22): Reported as more destructive than usual in the western part of the State.

Mississippi. C. Lyle (July 24): Causing injury to a garden in Covington County on June 19. Reported from Marshall County and from the east-central coun

ties, where the infestation is said to be general and heavy.

Nebraska. M. H. Swenk (July 15): Reported as damaging cabbage and other vegetables in Dawson County on June 27.

A CABBAGE WEEVIL (Ceutorhynchus assimilis Gyll.)

Washington. L. G. Smith (July 5): Few specimens of cabbage seed weevil collected in Pacific County this year for the first time. In Clallam County at Sequim, cabbage seed pods showed oviposition puncture on June 22. Few larvae found in pods. Adults abundant on wild mustard. (July 11): Adults attacking wild radish at Union, Clark County, on June 20, and wild mustard in Lewis and Cowlitz Counties. This may be the first record for both of these counties. Moderate damage to seed cabbage at Montesano and Brady, Grays Harbor County. Adults and larvae present.

SQUASH

SQUASH BUG (Anasa tristis Deg.)

Maine. J. Hawkins (July 18): Adults present at Monmouth, Kennebec County, and egg laying well under way.

New York. N. Y. State Coll. Agr. News Letter (July): Eggs and young nymphs in lower Hudson River Valley and western New York.

Wisconsin. E. L. Chambers (July 24): Observed in large numbers in truck-crop areas of Winnebago County in mid-July.

Missouri. L. Haseman (July 25): Apparently late in getting under way this year, but beginning to attract attention in central Missouri, ovipositing during the last week.

Louisiana. C. O. Eddy (July 25): Abundant.

Nebraska. M. H. Swenk (July 15): Complaints of attacking squash and cucumber plants received from Otoe, Burt, Saline, Platte, and Custer Counties from June 22 to July 5, inclusive.

D. B. Whelan (July 15): Adults seen laying eggs at Lincoln on July 11.

Oklahoma. F. A. Fenton (July 24): Reported on pumpkin vine at Sparks, in Lincoln County, and on watermelons in Ada, Pontotoc County.

Idaho. J. R. Douglass (July 20): Abundant in south-central Idaho and numerous inquiries regarding control received, but damage light.

Utah. G. F. Knowlton (July 25): Hundreds of adults, nymphs, and eggs present upon and under eight squash vines examined at Logan. (July 22): Injury reported from Davis, Cache, and Utah Counties in northern Utah.

SQUASH BORER (Melittia satyriniformis Hbn.)

New York. N. Y. State Coll. Agr. News Letter (July 24): Abundant and injury showing up freely in Monroe County. Larvae mostly small.

Michigan. R. Hutson (July 25): Reported from Detroit and Lansing.

Wisconsin. E. L. Chambers (July 24): Serious damage to squash vines in Dane and Milwaukee Counties.

SQUASH BEETLE (Epilachna borealis F.)

Missouri. L. Haseman (July 25): Squash ladybeetle working on squash in southeastern Missouri and doing some damage during the week ended July 22.

CUCUMBERS

PICKLEWORM (Diaphania nitidalis Stoll)

Mississippi. C. Lyle (July 24): Reported as causing injury to squash, cucumbers, and cantaloups in Hinds County on June 30 and to cantaloups in Simpson and Tate Counties. Very abundant at State College during July.

Louisiana. C. O. Eddy (July 25): Very abundant.

CARROT

CARROT RUST FLY (Psila rosae F.)

Washington. L. G. Smith (July 5): Few carrots showed injury after treatments on June 26 in the Willapa Valley, Pacific County. (July 11): Damage to commercial and home gardens throughout Whatcom County. At Chehalis, Lewis County, carrots observed in a garden 100-percent infested. Roots so injured that tops were wilting. Larvae nearly mature.

ASPARAGUS

ASPARAGUS BEETLE (Crioceris asparagi L.)

Maryland. E. N. Cory (July 5): Attacking asparagus in Harford County.

South Carolina. F. Sherman (July 22): Adults taken on plants in the open at Clemson, the first record for this part of the State.

Utah. G. F. Knowlton (July 22): Slugs and adults found from Marriott, Weber County, to North Farmington, Davis County. Less dispersal of this recently introduced pest occurred this year than in 1938.

TURNIP

CABBAGE MAGGOT (Hylemya brassicae Bouche)

Maine. J. Hawkins (July 2): Unusually injurious to young rutabaga plants at Harrington. Cabbage suffered early injury but, on the whole, probably less serious than usual.

EGGPLANT

EGGPLANT LACEBUG (Gargaphia solani Heid.)

Ohio. N. F. Howard (July 14): Numerous and causing considerable injury at South Point.

ONIONS

ONION THrips (Thrips tabaci Lind.)

Connecticut. N. Turner (July 18): Onions along shore heavily infested but large fields in Hartford County show less infestation than usual.

New York. N. Y. State Coll. Agr. News Letter (July 24): Injury to muck onions approaching serious proportions in continued absence of rains. From 50 to 300 thrips per plant counted in end parts of extensive plantings in Madison County, while interior of fields showed only 10 to 25 per plant on July 18. In Genesee and Orleans Counties on July 20 the average was well over 25 thrips per plant. In Monroe County thrips have in some instances seriously injured upland onions and in Orange County, according to report, population is building up slowly.

Washington. K. E. Bigson (July 18): Damaging fall onions in experimental plots at Walla Walla. Damage particularly noticeable, as onions are late and have practically stopped growing.

L. G. Smith (July 11): Injury just showing up at Walnut Grove, Clark County, on June 30 but population increasing.

ONION MAGGOT (Hylemya antiqua Meig.).

Washington. L. G. Smith (June 27): A 5-acre patch of seeded onions at Medical Lake, Spokane County, badly damaged. (July 11): Some immature and mature larvae found at Walnut Grove on June 30. Some adults had emerged. Damage estimated at 10 percent.

RADISH

TURNIP APHID (Rhopalosiphum psuedobrassicae Davis)

Idaho. R. W. Haegle (July 17): Infestations of what is probably the turnip aphid found in most radish fields in southwestern Idaho. Heavy damage expected in a few fields.

SPINACH

SPINACH LEAF MINER (Pegomya hyoscyami Panz.)

Wisconsin. C. L. Fluke (June 27): Entire crop ruined at State Farm, Fond du Lac County.

SWEETPOTATO

COWPEA CURCULIO (Chalcodermus aeneus Boh.)

North Carolina. L. W. Brannon (June 16): Weevils numerous on sweetpotato foliage on several farms in Currituck County. This insect has never heretofore been observed on sweetpotatoes by either the writer or growers in that area. (Det. by L. L. Buchanan.)

STRAWBERRY

STRAWBERRY WEEVILS (Brachyrhinus spp.)

Montana. H. B. Mills (July 17): B. ovatus L. moderately abundant in Flathead County. One 28-acre field of strawberries, which has been treated constantly, has been practically cleaned of this pest.

Utah. G. F. Knowlton (July 7): B. ovatus and B. rugosostriatus Goeze damaging strawberry patches at Farmington, Centerville, and Bountiful, and both strawberries and raspberries throughout berry-growing areas of Utah County.

Washington. L. G. Smith (July 11): Moderate-to-severe damage by strawberry root weevil at Winlock, Lewis County. Nearly mature larvae in roots of plants.

STRAWBERRY CROWN BORER (Tyloderma fragariae Riley)

Indiana. J. J. Davis (July 22): More abundant and destructive in the Borden-Pekin area, southern Indiana, than last year.

Mississippi. C. Lyle (July 24): Plants infested with what appears to be larvae of strawberry crown borer received from Choctaw County on July 18.

Washington. L. G. Smith (July 11): Attacking strawberry plants in Lewis County on June 28. Most of the plants on 4-year-old plantings affected. Nearly mature larvae and pupae present, and some adults had emerged.

A ROOTWORM (Graphops pubescens Melsh.)

Indiana. J. J. Davis (July 22): Strawberry rootworm destructive to strawberry fields in the vicinity of Borden.

STRAWBERRY LEAF ROLLER (Ancylis comptana Froel.)

Wisconsin. E. L. Chambers (July 24): More severe throughout the southern part of the State than for several years.

Utah. G. F. Knowlton (July 10): Larvae scarce in patches examined at Provo, Orem, and Springville, Utah County, late in June.

Washington. L. G. Smith (June 27): Immature and nearly mature larvae found on nearly every strawberry plant examined in the South Bay area of Thurston County on June 20.

STRAWBERRY CROWN MOTH (Conopia bibionipennis Bdv.)

Washington. L. G. Smith (July 11): Severe damage being done in Lewis County; 4-year-old strawberry plants 100-percent infested; mature larvae, pupae, and empty pupal cases collected.

SPITTLE BUGS (Cercopidae)

Washington. L. G. Smith (June 27): Adults and nearly mature nymphs present, with moderate to severe damage to strawberries, in Thurston County on June 20. Two to six adults present on each plant.

PEPPER

PEPPER WEEVIL (Anththonomus eugenii Cano)

California. A. F. Howland (July 18): Generally light infestation found in about 150 acres of California chili pepper in San Luis Rey Valley at Oceanside, San Diego County. In a part of one of the fields as high as 8 out of 18 pods to the plant showed punctures. A Bell pepper planting showed 50 percent of pods in one corner of field damaged. Only 1 infested field of chili pepper noted in Orange County.

FULLER'S ROSE BEETLE (Pantomorus godmani Crotch)

Georgia. T. L. Bissell (June 27): Feeding heavily on foliage and stalks of pimiento pepper in Pike County, central Georgia. Only a patch about 10 feet square in the field was damaged. This is the first record on this host of which the writer knows.

SUGAR BEETS

SUGAR-BEET ROOT MAGGOT (Tetanops aldrichi Hendel)

Idaho. J. R. Douglass (July 20): Caused serious damage to growing sugar beets on sandy soil in the Paul-Rupert area.

Utah. G. F. Knowlton (July 15): Causing moderate injury to some fields of sugar beets at Ogden.

FIELD CRICKET (Gryllus assimilis F.)

Nebraska. M. H. Swenk (July 15): Report from Morrill County on July 3 that nymphs were seriously damaging small sugar beets by eating the crowns and cutting off their tops.

MINT

MINT FLEA BEETLE (Longitarsus waterhousei Kutsch)

Indiana. J. J. Davis (July 22): Serious damage caused to mint in northern Indiana during the last month.

C O T T O N I N S E C T S

BOLL WEEVIL (Anthonomus grandis Boh.)

South Carolina. F. F. Bondy, et al. (July 8): Emergence from cages at Florence slightly less than average. (July 15): General increase in Florence County, but only a few fields badly infested and being damaged. (July 22): Weather conditions favorable this week, and damage begun in some fields, while few are found in other fields. Some field movement, and 25 caught on screen trap in the trap crop.

Georgia. P. M. Gilmer, et al. (July 1): Injury from first-brood adults has begun in Tift, Berrien, Cook, Lowndes, and Echols Counties. Average infestation on untreated cotton in experimental plats rose from 3.1 percent to 10.7 this week. Treated cotton showed an increase from approximately 1.5 to 5 percent for the week. Injury all fresh, most squares on June 28-29 not being flared. (July 8): Activity in Tift, Berrien, Cook, and Lowndes Counties marked by a sharp rise in infestation levels, owing to first-brood activity. Indications of spreading out over territory heretofore lightly infested shown by increased infestation in isolated fields. (July 15): Second-brood adults beginning to appear in considerable numbers in this area. Now fairly common in the bloom, and infestation records show a rise over the previous week.

Florida. C. S. Rude (June 17): Specimens sent in from Hillsborough County. Field visited and infestation of almost 50 percent found. (July 8): Twenty-five fields visited during the week in Lake, Alachua, Gilchrist, and Union Counties. Infestation ranged from 5 to 83 percent. (July 15): Little change in infestation since last week in 34 fields examined in Alachua, Gilchrist, Marion, Putnam, Union, and Lake Counties, except in Lake County where there has been a general increase. (July 22): Examinations made in 54 fields in the above counties show infestation to have increased somewhat over a week ago. For the week ending July 23, 1938, infestation almost exactly the same as this year, except in Lake County, where no infestation occurred last year until about mid-August. Several fields in Hillsborough County examined. No counts made, but weevils reported as doing considerable damage.

Alabama. J. M. Robinson (July 14): Abundant around Auburn. More abundant in northwestern Alabama than for several years.

Mississippi. C. Lyle (July 24): Infestation high in all sections of the State, except the northeastern corner, although, generally, about the same as in 1938. In the Delta high infestations near all wooded areas and fairly low in open plantations.

E. W. Dunnam, et al. (July 22): In Washington County weevils are rapidly spreading to large open areas. Maximum square infestation near wooded areas around 50 to 60 percent in untreated cotton.

Fifty percent of points examined 1 mile from woods showed no infestation, while the other 50 percent showed infestations ranging from 1 to 10 percent.

R. L. McGarr, et al. (July 15): Noted as doing considerable damage in a few of the cotton fields examined this week in Oktibbeha and Lowndes Counties. During the week 5,500 squares examined in 14 fields showed an average of 29.4 percent squares punctured, as compared with 27.3 percent for last week, and 34 percent at this time last year.

Louisiana. R. C. Gaines and assistants (July 22): In Madison Parish an average of 16.8 percent of punctured squares found in untreated plots, on 22,800 squares, of which 3,819 were punctured. Average percentage of punctured squares in these plots ranged from 1.3 to 54.7. Examination of 5,838 fallen squares for July 15 showed a mortality of 47 percent, as compared with 50 percent from 3,385 squares on July 1 and 44 percent from 5,107 squares examined on July 15, 1938. Field flight-screen catch totaled 18, as compared to 19 in 1938 and 18 in 1937.

Texas. F. L. Thomas (July 5): Infestation causing damage on 33 of the 59 farms examined in the southern half of the State, particularly in Bastrop, Colorado, Fayette, and Waller Counties. In the coastal-bend area injurious only near the wooded areas. Severe damage reported near Brownwood, Brown County, in west-central Texas. (July 12): Rapidly increasing infestation checked somewhat by hot weather. In the black-land area of central Texas 53 farms in 9 counties showed weevils on all except 9 farms, and in sufficient numbers to justify control measures on 14. Slight increases in infestation in untreated river-bottom fields of Brazos and Burleson Counties. (July 19): In the northern half of the State 74 fields examined in 10 counties, and none found in 15 fields; damage caused in only 8. (July 26): Infestation in Falls, Limestone, and McLennan Counties only 15 percent, as compared with 20 percent the week before.

K. P. Ewing and W. S. McGregor (July 8): Considerable reduction in infestation this week over last in McLennan and Limestone Counties.

C. R. Parencia and S. E. Jones (July 15): Very scarce in Calhoun County. Apparently not of much importance in the Robstown area.

#### COTTON LEAF WORM (*Alabama argillacea* Hbn.)

Florida. J. R. Watson (July 21): Specimens sent in from Pinellas County on July 7.

C. S. Rude and assistants (July 8): Heavy infestation reported from Seffner, Hillsborough County. Another infestation observed in Gilchrist County near Trenton. (July 15): Observed in Gilchrist, Putnam, and Union Counties. Damage noticed only in Gilchrist County.

Louisiana. R. C. Gaines (July 17): One fourth-instar larva found on a cotton plant at Tallulah, Madison Parish, on July 16.

Texas. F. L. Thomas (July 5): First larvae appearing in the Brazos bottom were found on June 29 and were two-thirds grown. (July 19): Beginning to appear in injurious numbers in the coastal counties and in several counties of central Texas, along the Brazos River. Control measures being applied in Nueces, Fort Bend, and Brazos Counties. (July 26): Found in a few additional fields in central Texas but little damage caused.

C. R. Parencia and S. E. Jones (July 1): Several found during the week in Calhoun County but no damage observed. (July 15): Very scarce in Calhoun County but present in the Robstown area. Reported as doing damage on the Chapman ranch.

BOLLWORM (Heliothis armigera Hbn.)

South Carolina. F. F. Bondy, et al. (July 22): Numbers on cotton increasing in Florence County, but very little damage.

Georgia. P. M. Gilmer, et al. (July 1): A few isolated reports of injury in Tift, Berrien, Cook, Lowndes, and Echols Counties. One report from Dawson, Terrell County, indicating severe damage in one field, was accompanied by specimens.

O. I. Snapp (July 5): Considerable damage at Marshallville, central Georgia.

Florida. C. S. Rude and assistants (July 22): Present in many fields in Alachua, Gilchrist, Marion, Putnam, Union, and Lake Counties, and considerable damage done to small bolls and squares. Situation about the same as a year ago, and less serious than at this time 2 years ago.

Mississippi. State Plant Board (July 24): Some damage reported from various parts of the State.

E. W. Dunnam, et al. (July 22): Several small larvae found in Washington County, but no complaints received.

R. L. McGarr, et al. (July 15): A few noted in some of the cotton examined this week in Oktibbeha and Lowndes Counties.

Texas. F. L. Thomas (July 19): Not threatening in northern Texas, while in south-central Texas injury has appeared in a few scattered river-bottom fields. (July 26): Eggs occur in fairly large numbers in young, succulent cotton.

A. J. Chapman (July 8): Moths quite numerous in Presidio County. Only a spotted larval infestation noted in blooms.

K. P. Ewing, et al. (July 15): In one experiment in Falls County this week 2,400 cotton terminals showed an average of 19.9 eggs per 100 terminals. In 14 different fields in McLennan and Falls Counties 5,300 additional terminals showed an average of 14.1 eggs per 100 terminals.

C. R. Parencia and S. E. Jones (July 15): Very scarce in Calhoun County.

TOBACCO BUDWORM (*Heliothis virescens* F.)

Louisiana. R. C. Gaines and assistants (July 8): A few squares in Madison Parish attacked by what appears to be this species. Injury apparently less than last year.

PINK BOLLWORM (*Pectinophora gossypiella* Saund.)

Texas. A. J. Chapman (July 1): Seven moths emerged from the hibernation experiment at Presidio during the week. Bloom infestation counts indicate the lightest infestation since records started in 1934. Counts in 20 fields in the Presidio Valley showed 9 to be infested. (July 8): Although average infestation of the entire valley much lower than last year, apparently the heaviest infestation is concentrated in the Candelaria area.

COTTON LEAF PERFORATOR (*Bucculatrix thurberiella* Busck)

Texas. R. K. Fletcher (July 22): Found to be very abundant on June 10 in a field in the Brazos River bottom, Burleson County. (Det. by A. Busck.)

COTTON LEAF HOPPER (*Psallus seriatus* Reut.)

South Carolina. F. F. Bondy, et al. (July 22): Only a few present in the cotton in Florence County and doing no damage.

Mississippi. C. Lyle (July 24): Reports received from Marshall and Tallahatchie Counties, and signs of injury noted in the west-central counties, although infestation in general is very light.

Louisiana. C. O. Eddy (July 25): Damage caused in northwestern Louisiana.

Texas. F. L. Thomas (July 5): Increase in the northern half of the State, and some damage caused. Average infestation has more than doubled during the last week in Kaufman County, nearly doubled in McLennan and Falls Counties, and increased on all but 1 of 8 farms examined in Ellis County. In the southern half of the State control measures are needed on only 8 of 59 farms examined in 8 counties, Wharton County having the heaviest infestation in this area. Only light damage in the coastal bend area. (July 26): Numbers of adults much less abundant in northern and central Texas the last week. Young flea hoppers apparently leaving fields about as rapidly as they mature.

## FOREST AND SHADE - TREE INSECTS

### FOREST TENT CATERPILLAR (Malacosoma disstria Hbn.)

Vermont. H. L. Bailey (July 25): Much evidence of disease among larvae in Orange and Windsor Counties. Very little complete defoliation, but thinning of foliage in the upper White River Valley, central Vermont, and at Grafton and Chester, southeastern Vermont.

Washington. R. L. Furniss (June 26): During May larvae completely defoliated extensive stands of willow along the north bank of the Columbia River, in Cowlitz County. Appreciable defoliation noticeable on May 12. By May 23 many of the willows completely defoliated and immature caterpillars migrating in search of food. By June 15 a very large part of the population had died of starvation, and the remaining caterpillars were beginning to spin cocoons. Parasitization by tachinids comparatively low.

Oregon. R. L. Furniss (June 26): Very small larvae found on willows along the Coquille River near Coquille, Coos County, on May 20. While moderately abundant, it was evident that defoliation would be much less severe than in 1938, when willows and orchard trees in this vicinity were completely stripped. Extensive defoliation of several species of ceanothus by tent caterpillars (Malacosoma sp.) occurred this year in Josephine County, in the vicinity of Grants Pass. Infestation by this species slowly building up in this area since 1937. On May 19 a few mature larvae found, but most of them still actively feeding, and some had not left their tents. A high percentage of parasitization by tachinids was noted.

### WESTERN TENT CATERPILLAR (Malacosoma pluvialis Dyar)

Washington. R. L. Furniss (June 26): An outbreak occurred in the Puget Sound Basin. Heavy defoliation of alder noted in Pierce, King, Snohomish, and Skagit Counties. Other plants defoliated were apple, cherry (wild and cultivated), pear, plum, walnut, and wild rose. Considerable defoliation noted on May 11 on Whidby Island. On June 21 feeding nearly complete at Fairfax, and cocoon formation was beginning.

Oregon. R. L. Furniss (June 26): Light defoliation of orchard trees and wild rose noted near Lebanon, Linn County, on May 17, when larvae had reached maturity and were beginning to spin cocoons. In the coast counties moderately abundant on alder. On May 20 larvae were small and still congregated on the tents.

### BLUE-SIDED TENT CATERPILLAR (Malacosoma constricta Stretch)

Oregon. R. L. Furniss (June 26): On May 19 moderate defoliation of oaks (Quercus garryana and Q. kelloggii) noted near Grants Pass, Josephine County. At that time larvae had reached maturity. A high percentage parasitized by tachinids.

GREAT BASIN TENT CATERPILLAR (Malacosoma fragilis Stretch)

Oregon. J. M. Whiteside (June 26): After a lapse of nearly 10 years, this species has reappeared in epidemic proportions on the Deschutes National Forest, where it is causing a severe defoliation of bitterbrush (Purshia tridentata). As bitterbrush is the most important native browse and forage plant of western ranges, its defoliation for even 1 year is serious. Last epidemic on this forest occurred during the period 1928-30. Many pure stands of bitterbrush completely killed. Appearing on an area of about 640 acres in 1937, these caterpillars spread over such a large area in 1938 and 1939 that control measures are almost impossible.

FALL WEBWORM (Hyphantria cunca Drury)

Connecticut. M. P. Zappe (July 13): Apparently much more abundant than normal on many kinds of trees and shrubs in New Haven and Fairfield Counties.

New York. N. Y. State Coll. Agr. News Letter (July 10): Becoming somewhat abundant in Rockland and Ulster Counties, in the Hudson River Valley, and a few noticed in Clinton County, western New York.

R. D. Glasgow (July 17): The territory around Millbrook, Dutchess County, in the Hudson River Valley, is experiencing its heaviest outbreak since 1930.

New Jersey. F. A. Soraci (July 1): Quite abundant on mixed trees over the northern half of the State.

Georgia. O. I. Snapp (July 20): Infestation at Fort Valley, central Georgia, about that of an average year. Nests of full-grown larvae now common in most pecan groves.

Mississippi. C. Lyle (July 24): Generally abundant on pecan, persimmon, and hickory trees in most sections of the State.

FALL CANKERWORM (Alsophila pometaria Harr.)

North Carolina. B. H. Wilford and R. J. Kowal (June 30): Defoliation in areas along the Mount Pisgah motor road in Transylvania, Haywood, and McDowell Counties more severe this year than any year since 1936; defoliation along the Mount Mitchell motor road less than in previous years.

SPRING CANKERWORM (Paleacrita vernata Peck.)

North Dakota. R. H. Nagel (June 12): Complete defoliation of elm by May 30 in the park area of the resettlement project in the Sheyenne River Valley, in Richland and Ransom Counties. About 200 acres of mature river-bottom elm observed to be damaged in Shonford Township. Injury to wild plum, ash, and hackberry.

GYPSY MOTH (Porthezia dispar L.)

Vermont. H. L. Bailey (July 25): Extremely abundant in Windham County. Areas of oak woodland defoliated in Rockingham, Putney, and Westminster, southeastern Vermont. Larvae, pupae, adults, and new egg masses found on July 20 at Rockingham.

Rhode Island. A. E. Stene (July 19): Abundant in the State, but not in exactly the same locations as last year.

BAGWORM (Thyridopteryx ephemeraeformis Haw.)

Pennsylvania. T. L. Guyton (July 17): Isolated arborvitae trees defoliated at Harrisburg.

Delaware. L. A. Stearns (July 5): Severe infestation on arborvitae at Hockessin reported and control measures recommended.

Maryland. E. N. Cory (July 20): Specimens sent in from Baltimore, Frederick, and Prince Georges Counties. In lower Prince Georges County found feeding on strawberries in the vicinity of heavily infested cedars.

Virginia. H. G. Walker and L. D. Anderson (July 27): Rather abundant and considerable damage caused to evergreen trees in the Norfolk area.

North Carolina. B. H. Wilford (June 30): Serious damage to ornamental conifers occurring in various sections of Asheville.

Z. P. Metcalf (July 15): Observed at Fallston.

South Carolina. F. Sherman and J. A. Berly (July 22): More abundant than usual.

Ohio. E. W. Mendenhall (July 11): Very destructive to evergreens in Columbus and Springfield, and southern Ohio towns and cities.

Indiana. J. J. Davis (July 22): Reported as abundant in southern Indiana.

Illinois. W. P. Flint (July 22): Very abundant in the southern third of Illinois. Infestation very severe in many towns and cities, and moderate to heavy in some country districts. Parasites apparently exerting very little influence.

Missouri. A. C. Burrill (June 29): More active this month than last at Jefferson City on arborvitae.

Kentucky. W. A. Price (July): Very abundant. Received from every section of the State.

Tennessee. G. M. Bentley (July 1): Causing injury to several arborvitae and junipers at Nashville, Davidson County.

Alabama. J. M. Robinson (July 14): Found on shrubs at Fountain on June 30.

Mississippi. C. Lyle (July 24): Specimens taken from arborvitae received from Choctaw, Clarke, Copiah, Hinds, Jones, and Scott Counties. Requests for information received from Holmes, Prentiss, and other counties.

Texas. R. K. Fletcher (July 22): Reported from Harris County on cedar and from Smith County on arborvitae.

OYSTERSHELL SCALE (Lepidosaphes ulmi L.)

Utah. G. F. Knowlton (July 22): Many willows and poplar trees heavily infested at Salt Lake and Logan.

PERIODICAL CICADA (Magicicada septendecim L.)

Indiana. J. J. Davis (July 22): Young orchards seriously damaged in Lake, La Porte, and Porter Counties.

Illinois. W. L. McAtee (July 2): For several miles on each side of Willow Spring, along the railroad tracks, evidences seen in partially or entirely browned trees, mostly oaks, of the most severe infestation ever seen. Somewhat less obvious damage noted in West Chicago, at about the Brookfield Zoo, and as far east as Wellsboro, Ind.

V. H. Condon (July 8): Occurrence reported as follows: Glen-coe, north of Chicago; Hinsdale and LaGrange, just west of Chicago; and as plentiful in the forest preserves lying along the western edge of Chicago and suburbs.

ASH

CARPENTER WORM (Prionoxystus robiniae Peck)

Nebraska. D. B. Whelan (June 23): Adults emerging from ash trees in Lincoln.

M. H. Swenk (July 15): Reported on June 26 as damaging an ash tree in Antelope County.

BIRCH

A BIRCH LEAF MINER (Fenusia pumila Klug)

New York. M. D. Leonard (July 11): A number of birch trees at Flushing showed a light infestation on June 27. Infestation now apparently somewhat heavier, but little real disfiguration of foliage.

New Jersey. M. D. Leonard (July 6): A great many birch trees examined in one part of Ridgewood show moderate infestation.

BRONZED BIRCH BORER (Agrilus anxius Gory)

Ohio. E. W. Mendenhall (July 26): Very bad on white birch in Columbus, destroying the trees.

CATALPA

CATALPA MIDGE (Cecidomyia catalpae Comst.)

Maryland. E. N. Cory (July 17): Observed on catalpa at Hancock, western Maryland.

CATALPA SPHINX (Ceratomia catalpae Bdv.)

Ohio. N. F. Howard (June 23): Numerous, and some trees defoliated at Columbus on June 19.

Nebraska. M. H. Swenk (July 15): Adult sent in from Furnas County on June 3.

COMSTOCK'S MEALYBUG (Pseudococcus comstocki Kuw.)

Michigan. E. I. McDaniel (July 25): Catalpa mealybug received from Detroit on July 20. Unusual in Michigan.

CEDAR

A TORTRICID (Tortrix cockerellana Kearf.)

Nebraska. M. H. Swenk (July 15): Reported from Thomas County on July 7 that red cedar trees in that locality were being defoliated.

CYPRESS

A CYPRESS LEAF MINER (Recurvaria apicitripunctella Clem.)

New York. E. P. Felt (July 22): Bald cypress, showing considerable damage received from White Plains.

ELM

ELM LEAF BEETLE (Galerucella xanthomelaena Schr.)

Massachusetts. J. V. Schaffner, Jr. (July 14): Some of the elm trees in Bellingham, Franklin, and Wrentham, Norfolk County, heavily infested.

Rhode Island. A. E. Stene (July 19): Unusually abundant and trees badly defoliated in some of the valley sections.

Maryland. E. N. Cory (July 1): Elm attacked at Towson, Baltimore County.

South Carolina. J. A. Berly (July 22): Destructive on street elms in Greenville.

New York. M. D. Leonard (July 20): A moderate to considerable amount of foliage injury on the many large American and English elms at Flushing on July 3.

New Jersey. C. W. Collins (July 19): Causing severe injury to elm foliage in Chatham, Florham Park, Whippanny, Hanover, Pluckemin, and East Orange, northern New Jersey. Same trees severely fed upon for the last 3 years.

Idaho. R. W. Haegele (July 17): Many elms in southwestern Idaho defoliated as result of attack by first brood. No injury where treatment applied.

Washington. E. W. Jones (July 1): First-brood larvae are descending trunks of elm trees at Walla Walla, the leaves having been badly eaten; pupating at bases of trees.

SMALLER EUROPEAN ELM BARK BEETLE (*Scolytus multistriatus* Marsham)

New Jersey. C. W. Collins (July 19): Collections of adults at six points in northern New Jersey, where collections have been made for several years, show a decrease in abundance in comparison with the 1938 records.

ELM COCKSCOMB GALL (*Colopha ulmicola* L.)

Michigan. E. I. McDaniel (July 3): Adults leaving the foliage of elm on June 19. Common this year in the southern half of the State.

Indiana. J. J. Davis (July 22): Unusually abundant, judging by the many specimens sent in.

APHIDS (*Eriosoma* spp.)

Indiana. J. J. Davis (July 22): Many letters received regarding the woolly elm aphid (*E. americana* Riley) and the woolly apple aphid (*E. lanigerum* Hausm.) on elm.

EUROPEAN ELM SCALE (*Gossyparia spuria* Mod.)

Wisconsin. E. L. Chambers (July 24): Apparently on the increase in southern Wisconsin, where it is now known to be established in about 12 localities. About 600 elm trees condemned in 1 nursery where it was found.

DOUGLAS FIR

DOUGLAS-FIR BEETLE (*Dendroctonus pseudotsugae* Hopk.)

Idaho. J. C. Evenden (July 20): During the last 3 years a large percentage of the mature Douglas-fir in the Shot Gun Valley, near Spencer, has been destroyed. Infestation still serious.

Oregon. F. P. Keen (June 26): Group killing unusually abundant this year on Douglas-fir along the Oregon coast, probably as an aftermath of forest fires in 1937.

A WEEVIL (Cylindrocopturus longulus Lec.)

Washington. R. L. Furniss (June 26): Damage to lateral and terminal branches of Douglas-fir by the Douglas-fir tip weevil exceedingly abundant throughout Washington, particularly on the prairie district south of Puget Sound. Damage most pronounced on poor sites with thin topsoil. Open-grown trees less than 25 feet high preferred, and trees over 12 feet high seldom seriously affected.

LARCH

LARCH SAWFLY (Lygacconematus erichsonii Htg.)

Montana. J. C. Evenden (July 20): Recently found along the Clark Fork River for a distance of some 25 miles west of Thompson Falls. Severe defoliation on western larch.

LINDEN

LINDEN WART GALL (Cecidomyia verrucicola O. S.)

New York and Pennsylvania. E. P. Felt (July 22): Reported as abundant and somewhat injurious in southern Westchester County, N. Y., and in the Philadelphia area, Pa.

A LEAF MINER (Chalepus rubra Weber)

Michigan. R. Hutson (July 25): Reported from Byron Center on July 11 as attacking basswood leaves.

A CHRYSOMELID (Baliosus ruber Weber)

Minnesota. A. G. Ruggles and assistants (July 20): Moderately abundant on basswood at Perham, Ottertail County.

LOCUST

LOCUST LEAF MINER (Chalepus dorsalis Thunb.)

Pennsylvania. T. L. Guyton (July 17): Very numerous on black locust at Harrisburg.

Maryland. E. N. Cory (July 19): A very heavy defoliation on locust trees in Prince Georges and Charles Counties.

Virginia. W. S. Hough (July): Severe damage caused to locust trees in Frederick and Shenandoah Counties. Foliage of the black locust trees presents a brown, scorched appearance as seen from a distance.

North Carolina. B. H. Wilford (June 30): Foliage on black locusts in and around Asheville, Buncombe County, shows indications of great damage. Some areas of black locust, badly infested in 1937 and 1938, again attacked.

N. F. Howard (June 24): Very prevalent on honeylocust near Asheville.

Kentucky. W. A. Price (July): Much damage to black locust throughout the State.

Mississippi. C. Lyle (July 24): Adults on black locust sent in from Lafayette County on June 26.

LOCUST BORER (Cyllene robiniae Forst.)

Wisconsin. E. L. Chambers (July 24): Reported as quite serious in northwestern Wisconsin, where these trees are being planted in soil-erosion control.

MAPLE

AN APHID (Drepanaphis acerifoliae Thos.)

New York. M. D. Leonard (July 20): Many large sugar maple street shade trees at Jackson Heights considerably infested, with many alates per leaf and many full-grown apteræ and young. Honeydew abundant on the leaves. Ladybird beetles (Adalia bipunctata L.) common, often several per leaf.

WOOLLY ALDER APHID (Prociphilus tessellatus Fitch)

North Carolina. T. L. Bissell (July 5): Leaves on lower branches of Norway maple heavily infested and killed by colonies at Lake Junaluska. Residents report infestation of maples as becoming heavier and more injurious to trees each year.

APHIDS (Aphididae)

Idaho and Washington. J. C. Evenden (July 20): A severe infestation on all Norway maple throughout the northern part of Idaho and of eastern Washington is causing a heavy leaf drop and will probably result in the complete defoliation of many trees before the end of the season.

COTTONY MAPLE SCALE (Pulvinaria vitis L.)

Michigan. E. I. McDaniel (July 3): Hatching on June 25. Specimens from Niles and South Haven.

Wisconsin. E. L. Chambers (July 24): Quite abundant in several localities in southern Wisconsin.

A MITE (Phyllocoptes minutissimus Hodg.)

New York. E. P. Felt (July 22): A reddish velvety growth on red maple leaves, produced by a plant mite, reported in abundance on one tree at Syracuse.

OAK

AN APHID (Myzocallis bella Walsh)

New York. M. D. Leonard (July 23): A moderate infestation on 1 good-sized pin oak tree under observation at Flushing, many of the leaves having 10 to 20 per leaf.

GALL INSECTS

Pennsylvania. E. P. Felt (July 22): Honeycomb leaf galls (Neuroterus favosus Bass.) reported as somewhat common on an oak tree at Ivyland.

Nebraska. M. H. Swenk (July 15): Oak leaves infested with the oak pin gall, produced by the gall gnat Cincticornia pilulae Walsh, and with the oak button gall, caused by the gall wasp (Neuroterus umbilicatus Bass.), received on June 30 from Douglas County.

A LEAF MINER (Lithocolletes hamadrycella Clem.)

New York. R. E. Horsey (July 20): White-blotch oak leaf miner disfiguring red oak leaves, and common on both native and planted trees at Rochester.

A MITE (Paratetranychus ilicis McG.)

Georgia. T. L. Bissell (July 20): Yellowed water and willow oaks at Griffin and Experiment noticed about June 1. Examination on June 13 showed injury to upper surfaces of leaves. Innumerable eggs and cast skins found, indicating old injury, but few mites. Several examinations since have produced very few mites. (Det. tentatively by E. A. McGregor.)

PINE

NANTUCKET PINE SHOOT MOTH (Rhyacionia frustrana Comst.)

New Jersey. J. V. Schaffner, Jr. (July 24): Heavy infestations observed on July 10 throughout the New Jersey pine barrens, and plantations of shortleaf, red, and ponderosa pine on Belleplain State Forest noted as heavily infested. Pitch pine in the East and West Plains areas extremely heavily infested.

Maryland. E. N. Cory (July 20): Observed as attacking pine at Annapolis on July 1; on pine at Rockville and College Park.

Nebraska. M. H. Swenk (July 15): Request for control information received on July 10 from Cherry County.

**EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana Schiff.)**

Ohio. E. W. Mendenhall (July 22): Quite bad on mugho pine in nurseries in Summit County.

**PITCH TWIG MOTH (Petrova comstockiana Fern.)**

New York. C. L. Griswold (July 19): Pupae found at Chemung on May 29. Species abundant in a stand of pitch pine.

**A WEEVIL (Hylobius radicis Buch.)**

Connecticut. E. P. Felt (July 22): Pine root weevil caused serious injury at New Canaan in a planting of Austrian pine, a considerable proportion of a plot containing several hundred trees being affected. Some of the trees killed and others weakened.

**WHITE-PINE WEEVIL (Pissodes strobi Peck)**

Virginia. C. R. Willey and F. R. Freund (July): Probably more abundant than usual in nurseries in northern Virginia, especially in Fairfax County. Infested pine shoots collected on June 29.

Wisconsin. E. L. Chambers (July 24): Quite serious in central Wisconsin on white pine and spruce.

**PINE SAWFLIES (Tenthredinidae)**

New Jersey. C. L. Griswold (July 19): Larvae of Acantholyda erythrocephala L. and Neodiprion sertifera Geoff. generally more abundant this season than during 1938 in pine plantations in several counties.

**PINE NEEDLE SCALE (Chionaspis pinifoliae Fitch)**

New York. (July 3): A light infestation observed on a number of large trees at Flushing.

Nebraska. M. H. Swenk (July 15): Infested twig of Black Hills spruce sent in on July 6 from Scotts Bluff County.

D. B. Whelan (June 22): On pine trees at Big Springs, Deuel County.

**A SCALE (Toumeyella numismaticum P. & McD.)**

Michigan. E. I. McDaniel (July 3): Young of the Scotch pine scale were hatching on June 20 and establishing themselves upon the bark of twigs and branches. Specimens from Jackson, Milford, and Muskegon. Reported as doing much damage to jack pine.

POPLAR

COTTONWOOD LEAF BEETLE (Chrysomela scripta F.)

North Dakota. J. A. Munro (July 20): Reported as abundant in western Dunn County, and at Streeter, Stutsman County.

VAGABOND GALL (Mordwilkoja vagabunda Walsh)

South Dakota. H. C. Severin (July 18): Present in unusual numbers on poplar.

TULIPTREE SCALE (Toumeyella liriodendri Gmel.)

Virginia. C. R. Willey and F. R. Freund (July): A scattering of seedling trees of tulip poplar found infested in a field, which had been an old nursery block, in Fairfax County on June 27. A large tulip tree found very heavily infested on July 7 north of Richmond.

A TERMITE (Reticulitermes flavipes Koll.)

Connecticut. A. W. Morrill, Jr. (July 17): Feeding on poplar seedlings in Windsor.

SPRUCE

SPRUCE BUDWORM (Cacoecia fumiferana Clem.)

Wisconsin. E. L. Chambers (July 24): Again quite abundant in Douglas and Washburn Counties, defoliating balsam and spruce in quite large areas.

Minnesota. A. G. Ruggles (July 20): Moderately abundant.

A SPRUCE GALL APHID (Adelges cooleyi Gill.)

Washington. F. P. Keen (June 26): Abundant on Sitka and Engelmann spruces in arboretum at Wind River Experimental Forest. Galls ready to open on June 10. Eggs and young found under cottony tufts on Douglas-fir needles at Mineral on June 15.

EUROPEAN SPRUCE SAWFLY (Diprion polytomum Htg.)

Vermont. H. L. Bailey (July 25): High percentage of first-brood larvae had made cocoons by July 19 in the vicinity of Wilmington, Windham County, southern Vermont.

SPRUCE MITE (Paratetranychus uniunguis Jacobi)

South Dakota. H. C. Severin (July 18): Abundant and considerable damage done to spruce trees.

WILLOW

POPLAR AND WILLOW BORER (Sternocetus lapathi L.)

Oregon. F. P. Keen (June 26): Abundant in native willows around Portland. Full-grown larvae present on June 10.

W. D. Edwards (July 11): First adults observed at Portland. Most adults expected to emerge by August 1. Severe injury to river willows common in infested areas.

EUROPEAN WILLOW LEAF BEETLE (Plagiodesma versicolora Laich.)

Maryland. E. N. Cory (July 18): Found on willow at Annapolis.

AN APHID (Chaitophorus viminalis Monell)

New Jersey. M. D. Leonard (July 6): Infestation at Ridgewood, reported as of June 15, is now very heavy, and alates much more numerous. Still very abundant on the many large watersprouts.

I N S E C T S A F F E C T I N G G R E E N H O U S E  
A N D O R N A M E N T A L P L A N T S

FULLER'S ROSE BEETLE (Pantomorus godmani Crotch)

Virginia. H. G. Walker and L. D. Anderson (July 27): Found killing azalea plants at Norfolk by barking the stems of the plants just below the surface of the ground.

A NITIDULID (Meligethes mutatus Harold)

Delaware. E. P. Felt (July 22): Injury to sweet pea blossoms reported from Wilmington.

A CURCULIONID (Sitona flavescons Marsham)

South Dakota. H. C. Severin (July 18): Considerable trouble in june-grass lawns. Found rather heavily infested with adults and grubs, as many as 4 or 5 per square foot. (Det. by L. L. Buchanan.)

FLEA BEETLES (Halticinae)

Nebraska. M. H. Swenk (July 15): Specimens of Disonycha triangularis Say and Systema hudsonias Forst. sent in from Douglas County on June 22 with the report that they were found on asters and other plants and weeds.

HAIRY CHINCH BUG (Blissus hirtus Montd.)

Connecticut. J. P. Johnson (July 24): Prolonged drought together with favorable temperatures doubtless responsible for an increase in lawn

infestations. Populations have increased in certain infestations, and a count of 788 nymphs, including a very few adults, to 1 square foot was recorded.

Virginia. F. F. Dicke (July 1): Specimens of adults and nymphs collected at Arlington Farms on June 30. (Det. by H. G. Barber.)

PINEAPPLE MEALYBUG (Pseudococcus brevipes Ckll.)

Florida. C. A. Weigel (May 27): Correspondent reports this mealybug as doing serious injury to approximately 60,000 Asparagus plumosus plants being grown under slat roof at West Palm Beach. (Det. by H. Morrison.) Two species of ants, Solenopsis geminata F. and Brachymyrmex sp., associated with this infestation. (Det. by M. R. Smith.)

SOFT SCALE (Coccus hesperidum L.)

North Carolina. Z. P. Metcalf (July 15): Observed at Charlotte.

COTTONY-CUSHION SCALE (Icerya purchasi Mask.)

South Carolina. C. F. Rainwater (July 22): Found on Nandina sp. and causing severe injury to Ligustrum sp. and other shrubs at Florence. (Det. by H. Morrison.)

WHITE PEACH SCALE (Aulacaspis pentagona Targ.)

Maryland. E. N. Cory (July 19): Found on Japanese cherry at Mount Rainier.

Virginia. C. R. Willey and F. R. Freund (July 19): Second brood now hatching in Richmond.

Florida. Florence D. Howard (May 12): Heavily infesting kudzu vine at Jacksonville. (Det. by H. Morrison.)

ARBORVITAE

ARBORVITAE LEAF MINER (Argyresthia thuiella Pack.)

Virginia. W. S. Hough (July): Late in May moths began emerging in swarms from the arborvitae trees growing on school grounds at Winchester. Larval damage conspicuous on many trees.

AZALEA

AZALEA SCALE (Eriococcus azaleae Comst.)

Mississippi. C. Lyle (July 24): Azalea plants infested by this species sent from Walthall County on June 29.

COLUMBINE

COLUMBINE LEAF MINER (Phytomyza minuscula Gour.)

Maryland. E. N. Cory (July 18): Attacking columbines at Baltimore.

A WEEVIL (Conotrachelus anaglypticus Say)

Virginia. C. A. Weigel (June 23): Serious injury to columbine reported at Orange from what appears to be this insect.

EUONYMUS

EUONYMUS SCALE (Chionaspis euonymi Comst.)

Maryland. E. N. Cory (June 26): Found on euonymus at Frederick.

North Carolina. Z. P. Metcalf (July 15): Observed at Roaring River.

South Carolina. J. A. Berly (July 22): As prevalent in many places as usual.

Mississippi. C. Lyle (July 24): Severe infestations reported from Hinds, Madison, and Monroe Counties.

Texas. F. L. Thomas (July 22): Abundant on euonymus in McLennan County.

GLADIOLUS

GLADIOLUS THrips (Taeniothrips simplex Morison)

Maryland. E. N. Cory (July 14): Found on gladiolus at Pikesville, Baltimore County.

Virginia. H. G. Walker and L. D. Anderson (July 27): A number of infested plants received from different people in Norfolk early in July. Reported as heavily infesting their gladiolus plantings.

Mississippi. C. Lyle (July 24): Specimens of thrips from gladiolus received on June 26 from Winston County.

Wisconsin. E. L. Chambers (July 24): Many plantings of gladiolus in the State observed to be infested.

JUNIPER

JUNIPER SCALE (Diaspis carueli Targ.)

Maryland. E. N. Cory (July 18): Found on Pfitzer juniper at Lansdowne, Baltimore County.

LARKSPUR

AN APHID (Aphis rociadae Ckll.)

Minnesota. A. G. Ruggles (July 20): Very abundant on delphinium at Saint Paul.

LILY

A NOCTUID (Xanthopastis timais Cram.)

Mississippi. C. Lyle (July 24): Larvae, taken from lilies in Leflore County, sent in on June 27.

LILAC

LILAC BORER (Podosesia syringae Harr.)

New York. R. E. Horsey (July 18): Numerous in lilac at Rochester.

MAGNOLIA

MAGNOLIA SCALE (Neolecanium cornuparvum Thro)

New York. R. E. Horsey (July 20): Quite common on several species of magnolia. More numerous than usual on this ornamental planting in Rochester.

PYRACANTHA

A LACEBUG (Corythucha arcuata Say)

Tennessee. G. M. Bentley (June 20): Reported on pyracantha at Chattanooga, Hamilton County.

ROSE

ROSE SAWFLY (Caliroa aethiops F.)

Washington. L. G. Smith (July 5): Causing severe netting of rose leaves in Thurston County on June 20.

A SCARABAEID (Trichiotinus piger F.)

Maryland. E. N. Cory (June 20): Found on roses at Cumberland.

A BEETLE (Luperodes sp.)

Texas. C. A. Weigel (June 17): Luperodes sp. near brunneus Crotch reported as proving extremely destructive to roses at Fort Sam Huston, near San Antonio. (Det. by H. S. Barber.)

A CHRYSOMELID (Antipus laticlavia Forst.)

Minnesota. A. G. Ruggles (July 20): Moderately abundant on rose at Wayzata, Hennepin County.

ROSE APHID (Macrosiphum rosae L.)

New York. M. D. Leonard (July 11): Many rose plants at Flushing repeatedly examined and found almost entirely uninfested.

New Jersey. M. D. Leonard (July 6): At Ridgewood a great many rose bushes, both climbing and shrub varieties, which have previously been at least lightly infested, showed almost no aphids.

POTATO APHID (Macrosiphum solanifolii Ashm.)

Utah. G. F. Knowlton (July 10): Observed in damaging abundance on apical growth of rose in several parts of northern Utah during the spring.

THrips (Thysanoptera)

New York. M. D. Leonard (July 21): Abundance of thrips reported in rose blooms in Queens County during July. Considerable damage to flower parts.

Mississippi. C. Lyle (July 24): Specimens of thrips on rose received from Hancock County on June 25. Reports of considerable injury to roses received from the southwestern counties.

Washington. L. W. King (June 27): On June 19 throughout Whatcom County rose buds were deformed by thrips, some failing to open and the flowers that did open being distorted.

SNOWBALL

SNOWBALL APHID (Aphis viburnicola Gill.)

Nebraska. D. B. Whelan (June 22): Snowball bushes affected at Big Springs, Deuel County.

SPIRAEA

SPIRAEA APHID (Aphis spiraecola Patch)

New York. M. D. Leonard (July 20): A number of spiraea bushes, moderately infested earlier in the season at Jackson Heights, show almost no aphids at all now, nor for some time past.

SWEETGUM

A SCALE (Cryptophyllaspis liquidambaris Kot.)

New York. E. P. Felt (July 22): Liquidambar leaves showing abundant infestation received from New York City. Infestation evidently in that general area. (Det. by H. Morrison.)

WATERLILIES

AN APHID (Rhopalosiphum nymphaeae L.)

New York. M. D. Leonard (July 19): Several large patches of waterlily plants in a pool at Flushing considerably infested.

YEW

A MEALYBUG (Pseudococcus cuspidatae Rau)

Wisconsin. E. L. Chambers (June 26): Found injuring Japanese yew trees in a nursery at Milwaukee. (Det. by H. Morrison.)

A SCALE (Leccanum fletcheri Ckll.)

Wisconsin. E. L. Chambers (June 26): Specimens of insects working on Japanese yew trees in a nursery at Milwaukee. (Det. by H. Morrison.)

I N S E C T S A T T A C K I N G M A N A N D  
D O M E S T I C A N I M A L S

MAN

MOSQUITOES (*Culicinae*)

Florida. W. V. King (June 30): The crab-hole mosquito (Deinocerites cancer Thob.) reported as attacking man during the day and causing considerable annoyance on one occasion on a marsh in Broward County. The pitcherplant mosquito (Wyeomyia smithii Coq.) was collected for the first time in Florida near Tallahassee. Severe outbreaks of Psorophora columbiana D. & K. occurred during June throughout central Florida. A very large number appeared in the trap collection at New Smyrna on the night of June 23. Three heavy infestations of salt-marsh mosquitoes (Aedes sollicitans Walk.) occurred in Volusia County during May and June. Rains, rather than high tides, appeared to be chiefly responsible for the breeding.

EYE GNATS (Hippelates spp.)

Georgia. A. L. Brody and E. E. Rogers (July 22): Exceptionally abundant at Valdosta. Largest catch ever made at Valdosta was made during the last month. Exceedingly annoying to workers outdoors.

Texas. C. C. Deonier (June): Found to be especially numerous in the irrigated district about Quemado.

CLEAR LAKE GEAT (Chaoborus sp.)

California. A. W. Lindquist (June 30): First emergence occurred at Nice on April 26. Two peaks of emergence, May 24-28 and June 7-13, indicated. Greatest emergence within approximately 3/4 mile of shore. Emergence of the overwintering brood extended over a 52-day period. Length of the larval period of the overwintering brood somewhere around 8 months and possibly longer. Status traps have indicated a much lower incidence than last August.

AMERICAN DOG TICK (Dermacentor variabilis Say)

Rhode Island. A. E. Stene (July 19): Apparently unusually abundant, and reports received of dogs being covered with them.

Delaware. L. A. Stearns (July 5): Severe infestation on several dogs at Glasgow, New Castle County.

Maryland. E. N. Cory (July 20): Numerous requests for information, indicating a rather general infestation.

J. A. Hyslop (July 15): Worst infestation observed in the last 20 years now occurring in the region of Avenel. As many as 100 ticks, in all stages of engorgement, removed from a single dog.

Gertrude Myers (July 15): Seldom found on one farm near Rockville, and very few found on the dog on this farm, although many complaints received from nearby. Barn owls have bred for the last 5 years in a dead tree on the lawn, possibly keeping the rodents cleaned out and thereby cutting down the population of ticks on this property.

Virginia. C. R. Willey and F. R. Freund (July): Very abundant. Many specimens sent or brought in throughout June and July. Picked off clothes in quantities, particularly when at a nursery 4 miles north of Richmond. Apparently about as numerous in nurseries in Loudoun, Fairfax, and Arlington Counties.

Wisconsin. E. L. Chambers (July 24): Very abundant in many sections throughout the State.

BROWN DOG TICK (Rhipicephalus sanguineus Latr.)

Virginia. C. R. Willey and F. R. Freund (July): Several specimens, collected in houses, received this spring. Specimens sent from Hampton on July 14 with the report that they were being annoying in an apartment.

Indiana. J. J. Davis (July 22): Reported as annoying the last month from several localities in Indiana.

CHIGGER (Eutrombicula alfreddugosi Oud.)

Maryland. E. N. Cory (July 20): Numerous requests for information indicate a general infestation.

Indiana. J. J. Davis (July 22): Chiggers annoying in many regions, especially in camp grounds.

Wisconsin. E. L. Chambers (July 24): Very serious infestation observed in a home yard, and many others reported in Dane, Jefferson, and Milwaukee Counties.

Missouri. A. C. Burrill (July 4): Chiggers (Trombicula tlalzahuatl Murray) very abundant and annoying at Jefferson City for the last week.

Nebraska. D. B. Whelan (July 12): Very bad in Lincoln and eastern Nebraska.

GRASS THRIPS (Anaphothrips obscurus Mull.)

Indiana. J. J. Davis (July 22): Oatsbug more prevalent and annoying than usual late in June and during the first half of July.

DEER FLIES (Chrysops spp.)

Utah. G. F. Knowlton (July 21): C. fulvastra Will. and C. discalis Wied. extremely annoying to man and livestock in meadows and near moist areas at Fielding, Collinston, Penrose, Syracuse, Farmington, Centerville, and Appledale.

CATTLE

SCREWWORM (Cochliomyia americana C. & P.)

Georgia. A. L. Brody and E. E. Rogers (July 22): Unusual abundance of cases reported in Brooks and Lowndes Counties. At least 3 infestations per day on 15 animals found at Valdosta during the last month. An exceptional loss in young pigs during the last month reported from Lowndes County.

STABLEFLY (Stomoxys calcitrans L.)

North Dakota. J. A. Munro (July 20): Reported as particularly abundant on cattle in Stutsman County.

South Dakota. H. C. Severin (July 18): Apparently more abundant than usual.

Kansas. H. R. Bryson (July 20): Abundant and causing unusual amount of annoyance around barns and to animals on pasture

HORN FLY (Haematobia irritans L.)

Georgia. A. L. Brody and E. E. Rogers (July 22): More abundant at Valdosta than at any time during the last year, about 500 per animal.

Kansas. H. R. Bryson (July 20): Abundant and unusually annoying around barns and pastures.

Texas. W. G. Bruce (June 30): Fairly abundant in the vicinity of Dallas since the middle of May, infestations on cattle ranging from 200 to 2,000 flies per head.

CATTLE GRUBS (Hypoderma spp.)

Washington. L. G. Smith (July 5): Dairy cattle near Allen, Skagit County, being attacked by heel flies on June 21. (July 11): Dairy cattle in the locality of Woodland, Cowlitz County, bothered on June 29.

SHORT-NOSED CATTLE LOUSE (Haematopinus curysternus Nitz.)

Texas. O. G. Babcock (July): Infestations have decreased to the minimum during July.

LONG-NOSED CATTLE LOUSE (Linognathus vituli L.)

Texas. O. G. Babcock (July): Somewhat on the increase and holding its own so far this summer.

GULF COAST TICK (Amblyomma maculatum Koch)

Georgia. A. L. Brody and E. E. Rogers (July 22): Females began to appear at Valdosta in large numbers about the first week of July. Sheep and steers infested with as high as 30 ticks per ear. Ears in bad shape owing to closely massed, engorging females.

HORSE

NOSE BOTFLY (Gasterophilus haemorrhoidalis L.)

South Dakota. H. C. Severin (July 18): Very troublesome to horses over the entire State.

HORSEFLIES (Tabanus spp.)

Pennsylvania. C. W. Collins (July 20): A large horsefly, T. sulcifrons Macq., observed to be very abundant in the adult stage in Haycock and Nockamixon Townships, in northern Bucks County. Flies active in the middle of the day, moving to and fro over the road surface, over low areas bordering brooks, flying in and out the car windows, and annoying cattle in pasture.

Utah. G. F. Knowlton (July 21): T. sonomensis O. S., T. productus Hine, and T. punctifer O. S. are annoying horses and cows in various localities in northern Utah.

SHEEP

EAR TICK (Ornithodoros megnini Duges)

Texas. C. M. Deonier (June): Specimens taken on June 14 from the ears of sheep at Del Rio.

H O U S E H O L D   A N D   S T O R E D - P R O D U C T S   I N S E C T S

ANTS (Formicidae)

Rhode Island. A. E. Stene (July 19): Carpenter ants on timber trees observed more readily, owing to the many hollow trees being blown over by the hurricane; a considerable number also reported from houses.

Delaware. L. A. Stearns (July 12): Infestation of red ants reported in dwelling at Newark, New Castle County.

Indiana. J. J. Davis (July 22): Lawn ants, as well as those occurring in the house, reported as annoying and unusually abundant the last month.

Mississippi. C. Lyle (July 24): The Argentine ant (Iridomyrmex humilis Mayr) reported from houses in Monroe, Sunflower, and Yazoo Counties between June 26 and July 8. In the southwestern counties these ants are said to be very annoying. Specimens of the fire ant (Solenopsis xyloni McCook) received from Union County on June 30 and Leflore County on July 18. Reports indicate them as abundant in Grenada and Tate, as well as the west-central counties.

Missouri. A. G. Burrill (July 6): About twenty workers of Monomorium minimum Buckley found on tiger lily leaves at Jefferson City. (July 17): Very few found on leaves and none on buds of tiger lily.

Nebraska. M. H. Swenk (July 15): The mound-building prairie ant (Pogonomyrmex occidentalis Cress.) found infesting a lawn in Sheridan County on July 10, and reported as attacking a cottonwood tree and entering a house.

DRUGSTORE BEETLE (Stegobium paniceum L.)

Pennsylvania. S. H. Knight (July 10): Reported that these beetles have appeared in a house at Philadelphia at about this time of year for the last 3 or 4 years. (Det. by W. S. Fisher.)

BLACK CARPET BEETLE (Attagenus piceus Oliv.)

Rhode Island. A. E. Stone (July 19): Buffalo carpet beetle (Anthrenus scrophulariae L.) usually not so abundant as the black carpet beetle, but abundance about the same this year.

Nebraska. M. H. Swenk (July 15): Specimens sent in from Madison County on June 22.

TISSUE PAPER BUG (Thylocerias contractus Mots.)

North Carolina. E. A. Back (July 26): Larva infesting silk. (Det. by A. G. Boving.)

A CLOTHES MOTH (Tineola walsinghami Busck)

Florida. J. R. Watson (July 21): Brought in from Alachua County.

FIELD CRICKET (Gryllus assimilis F.)

Nebraska. M. H. Swenk (July 15): Proving a nuisance in buildings in Burt County late in June.

A WHARF BORER (Nacerda melanura L.)

Connecticut. N. Turner (July 18): Two lots of adults sent in from infested buildings during the last month.



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Ohio and Illinois. J. J. Davis (July 22): The wharf beetle reported as annoying in buildings from Cleveland and Toledo, Ohio, and Chicago, Ill.

Michigan. E. I. McDaniel (July 3): The wharf beetle was taken from a basement in Detroit, having apparently come from rotting timbers.

#### MISCELLANEOUS INSECTS

California. S. Lockwood (June 27): On June 9 a weevil, Rhynchites velatus Lec., found in California on the eastern slope of the Sierras, feeding rather extensively on fruits of Prunus andersonii, a native range plant. Insufficient in numbers to make collection easy in an area about 19 miles northwest of Reno, Nev.

North Carolina. L. W. Brannon (June 16): Larvae of chrysomelid (Lema lecontei Clark) observed completely defoliating jimsonweed in Currituck County. Larvae and newly emerged adults very numerous. (Det. by H. S. Barber.)

Alabama. J. M. Robinson (June 30): Reported from Forkland, Greene County, that in the last 2 years the scale Dactylopius confusus newsteadi Ckll. has reduced the pricklypear from entirely covering the ground to being scarce. (Det. by H. Morrison.)

Idaho. C. H. McDonald (July 1): By late June of 1937 foliage of the snowberry over approximately 150,000 acres of the Burley section of the Minidoka National Forest had been completely stripped by caterpillars of a saturniid, and the larvae had died, apparently from starvation. Some appeared on nearby roses, serviceberry, and other shrubs, but no form of reproduction apparent, and no adults to be linked with the larvae. None seen in 1938. By May 1, 1939, the snowberry was covered with this caterpillar, and a survey of 3 days revealed that even larger areas are infested than in 1937. However, 90 percent are dying, clinging to the stripped bushes. Snowberry in most sections is barren and dried up. No adults apparent. (Det. by C. Heinrich as Pseudohazis sp., probably P. hera Harr.)

New Jersey. M. D. Leonard (July 6): At Ridgewood a small patch of milkweed plants, which were uninfested when last examined on June 15, has a very considerable number of aphids (Myzocallis asclepiadis Moncll) on most leaves. Adalia bipunctata L. present on the plants.